NepaLinux User Manual Version 3.0
for
Gnome Desktop CD

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1. Gnome user manual

The objective of this section is to familiarize the user to this manual. In this section you will know about:

- How the manual has been arranged
- What is Nepalinux
- What is NepaLinux3.0
- What is new in Nepalinux3.0
- Starting Nepalinux3.0 Live CD

1.1 About the manual

This Manual “NepaLinux User Manual Version 3.0” has the help and guidelines for using NepaLinux3.0. NepaLinux is a GNU/Linux distribution developed and released by Madan Puraskar Pustakalaya. The target audience of NepaLinux are desktop users at government sectors, education sectors, corporate houses, home users etc.

The Nepalinux User Manual Version 3.0 Gnome manual has been prepared by taking into consideration the easiest way to learn Linux for new users. The categorization of topics into sections and within it the chapters makes the manual well arranged and easy to access. The screen-shots and special notes in every section makes the manual more friendly.

This document is not just a manual, but a detailed tutorial of general applications that comes pre-installed with almost all Linux distribution. Thus, this manual can be used as a reference for any Linux distribution with Gnome Desktop.

The basic overview of the manual has been illustrated below:

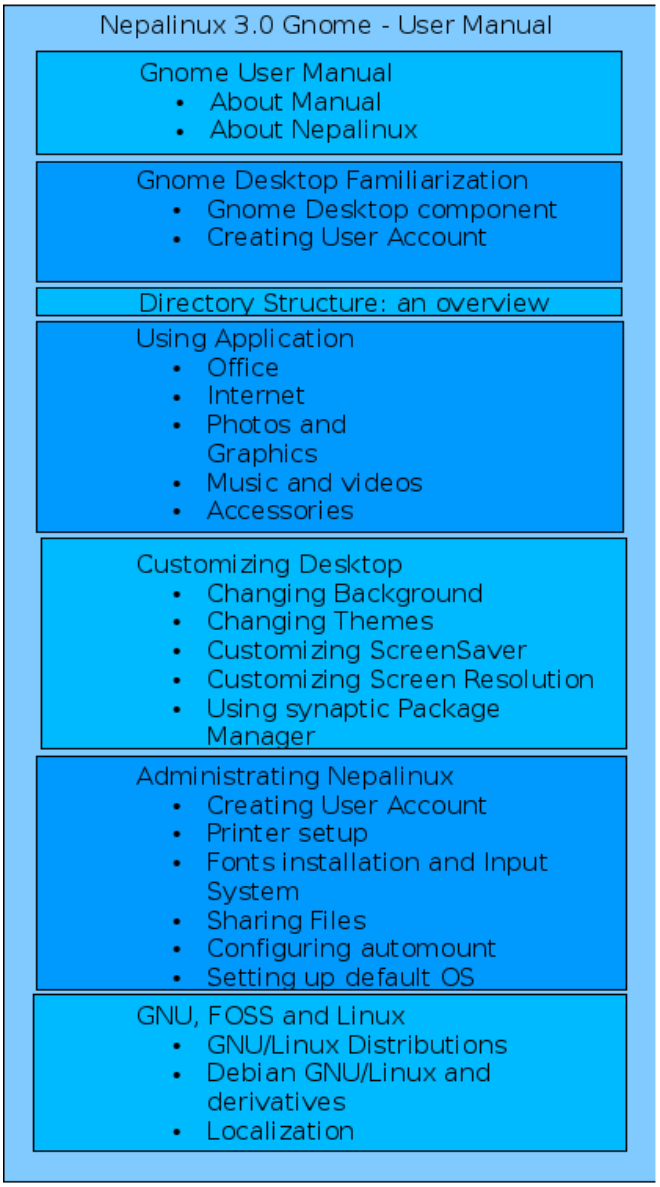

Fig. Representing the overview of Nepalinux Manual

1.2 About Nepalinux

1.2.1 What is NepaLinux ?

NepaLinux is a Debian, Knoppix and Morphix based Localized GNU/Linux **(also see section 7)** Distribution focused for Desktop users in Nepali language. NepaLinux comes up with localized open source software which can be used and modified freely as per the General Public License (GPL). The development and distribution of NepaLinux is done by Madan Puraskar Pustakalaya. The official site for NepaLinux is http://www.nepalinux.org

Starting from the launching of Nepalinux1.0 in December 2005, Nepalinux Development Team is focussed and committed on stability, user friendly, security and reliability. Within this period of time, three versions of Nepalinux were released namely, Nepalinux 1.0 , Nepalinux 1.1 and Nepalinux 2.0. The team has released LTSP enabled Nepalinux based on Nepalinux 2.0 focusing on education and with the vision of one ICT Lab per School. Nepalinux 2.0 came in 4 flavors: Nepalinux 2.0 Gnome CD and Nepalinux 2.0 KDE CD, Nepalinux 2.0 Gnome&KDE DVD, and LTSP Enabled Nepalinux2.0 DVD. Localized KDE was introduced for the first time in Nepalinux 2.0.

1.2.2 What is Nepalinux 3.0?

Nepalinux 3.0 is the new version of Nepalinux released on April,2008. The newly released distro is user friendly, stable and has maximum support for hardwares. It contains latest packages with additional applications like TuxType, Nepali Sabdakos, Nepali spell-checker, Text to Speech- Text Reader ...
The theme and graphical interface tries to reflect our nationality(नेपालीपन). The Nepalinux 3.0 will be a perfect choice for Nepali users as well as users comfortable with English Language. The next section throws light on features of Nepalinux 3.0.

1.2.3 Features of Nepalinux 3.0

Apart from Other Linux Distribution, Nepalinux 3.0 comes with:

1. Nepali Interface
2. OpenOffice.org with Nepali spell checker
3. Updated Nepali Unicode Keyboard layout
4. Contemporary Nepali to Nepali Dictionary
5. Nepali Tux Type, a Typing Tutor in Nepali
6. GCompris Educational Suite
7. Childsplay Education program

8. Nepali TTS(Text to Speech)
9. Gnash, a Free Flash Player
10. StartUp-Manager, GUI based grub editor
11. Wine, a Windows Emulator.
12. NTFS-3g, module for NTFS filesystem support in Nepalinux

1.2.4 Getting NepaLinux

NepaLinux can be collected from Madan Puraskar Pustakalaya or can be downloaded directly from http://www.NepaLinux.org/downloads/ .

1.2.5 License

NepaLinux, a Nepali GNU/Linux distribution, is distributed under the GNU GPL license. The GNU General Public License (GNU GPL or simply GPL) is a free software license, originally written by Richard Stallman for the GNU project. It has since become the most popular license for free/open source software. The latest version of the license is Version 3,released in 29 June 2007.
The GPL grants the recipients of a computer program the following rights, or "freedoms":

- The freedom to run the program, for any purpose.
- The freedom to study how the program works, and modify it. (Access to the source code is a precondition for this)
- The freedom to redistribute copies.
- The freedom to improve the program, and release the improvements to the public. (Access to the source code is a precondition for this)

Please refer to GNU GPL website http://www.gnu.org/licenses/gpl.html or appendix-I(pg. 86) to view the complete license.

1.2.6 Starting Nepalinux Live CD

NepaLinux is a Live-CD distribution that can be run directly from the CD. In this regard, one can actually get a independently working complete Linux distribution without even having a hard disk. This is done by loading the operating system completely into the memory.

To use NepaLinux through CD, just insert the CD into the CD ROM drive and restart the computer. The BIOS must be configured so that CD-ROM is your first boot device.

Some commonly occurring problems:

1. When the computer boots up completely, you might see desktop area bigger than the actual screen size with the hidden and larger icons.

   -To solve this problem you need to reboot the computer and press F4 in the grub splash screen and select 800x600 as resolution.

2. Fails to enter into GUI mode and falls back to terminal saying "Operation failed".

   -To solve this problem reboot the computer, select "Submenu" and enter - try vesa or fbdev.

With Live CD you can do almost all including using word-processor, listening to music, connecting to networks and Internet etc.

1.2.7 Installing into Hard disk

NepaLinux can also be installed into the hard disk. NepaLinux can also co-exist with other operating systems like MS-Windows. To install NepaLinux, you need at least one Linux native partition and a swap partition in your hard disk. Size of the swap partition is usually kept double of the ram size. Linux native partition should be at least 2 GB.

For details please see Installation manual. Go to **Applications** menu, point to **Accessories** and Click on **Nepalinux Installation Manual** to access the manual**.**

2. Gnome Desktop Familiarization

The objective of this section is to familiarize the user to Gnome desktop Environment. In this section you will know about:

- Gnome Desktop Components
- Logging in/ Logging out
- Changing Default Language
- Creating User Accounts

2.1 Gnome Desktop Components

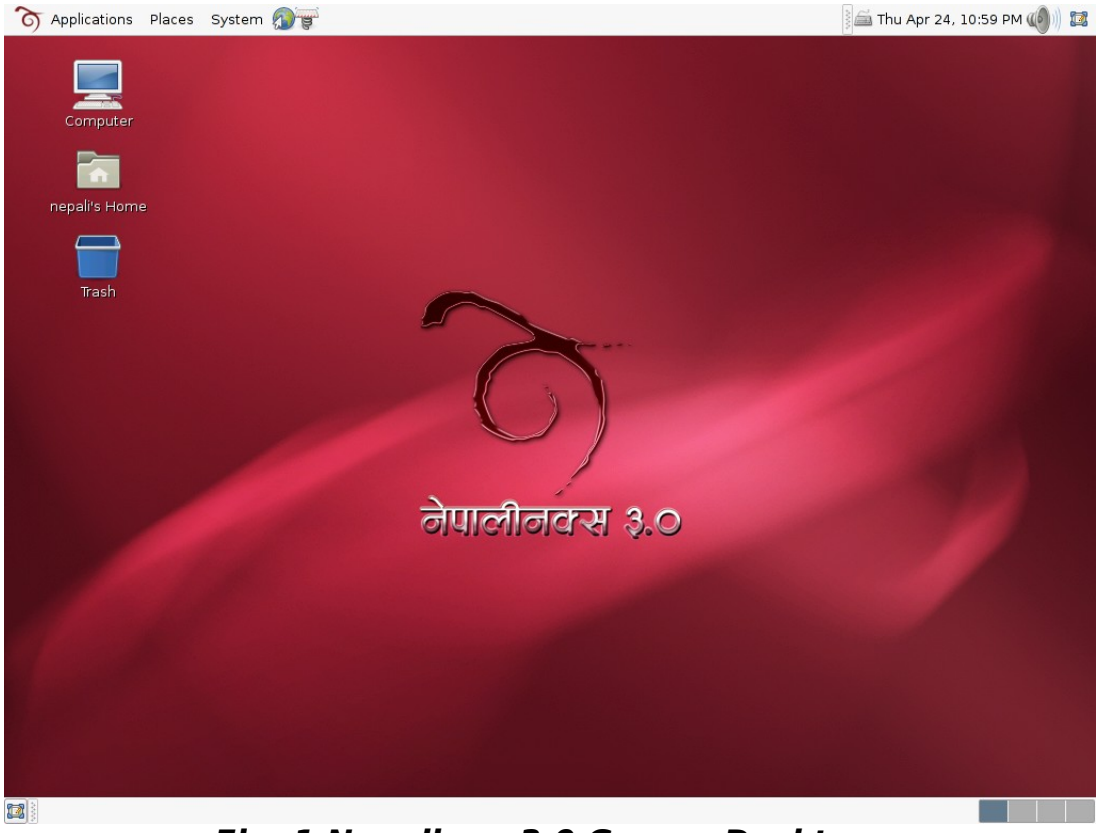

Fig. 1 Nepalinux 3.0 Gnome Desktop

The GNOME desktop is the default desktop of Nepalinux 3.0. GNOME (GNU Network Object Model Environment) is an international effort to build a complete desktop environment—the graphical user interface, which sits on top of a computer operating system—entirely from free software. This goal includes creating software development frameworks, selecting application software for the desktop and working on the programmes which manage application launching, file handling and window and task management. Community members worldwide contribute to the translation and accessibility of the desktop in multiple languages. (Reference: http://en.wikipedia.org/wiki/GNOME) Main Components of Gnome Desktop

2.1.1 Panels

Panels are areas in the GNOME Desktop from where you can access all of your system applications, taskbar and menus. By default, there are two panels in the GNOME environment - Top panel and Bottom panel.

The top panel in NepaLinux includes menu bar, quick launch applications, notifications, Date and time, window selector.

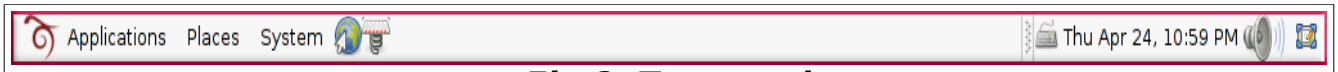

Fig.2 Top panel

Menu Bar The menu bar contains 3 special menus:

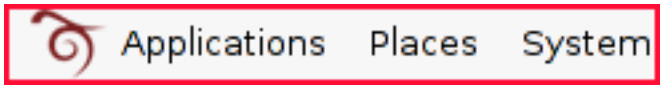

Fig.3 Menu bar

i. Application menu: Gives access to all standard applications. The installed applications are categorized into various sections for ease.

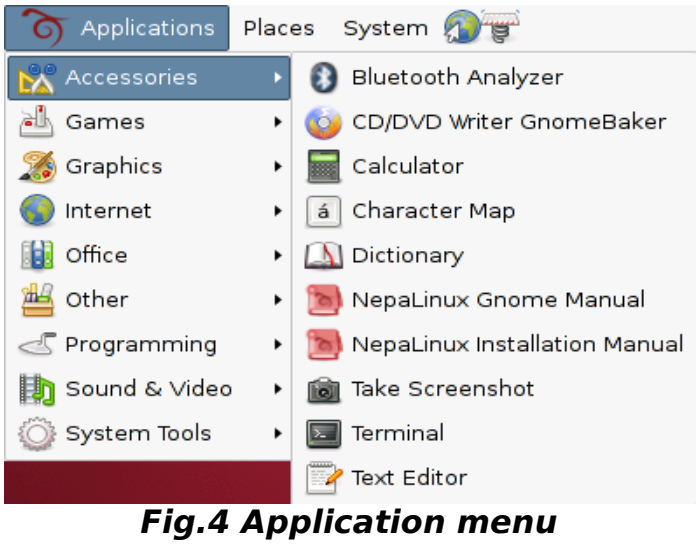

Fig.4 Application menu

ii. Places: Lists your home folder,computer, CD/dvd creator, networked servers, the search feature etc.

Fig.5 Places menu

iii. System: This menu allows you to change the settings of your computer. The administration section contains setting for the computer, i.e

change in any setting, applies for all users whereas the preference section contains setting for that particular user, i.e change in any setting applies only for that user.

Fig. 6a System>Administration

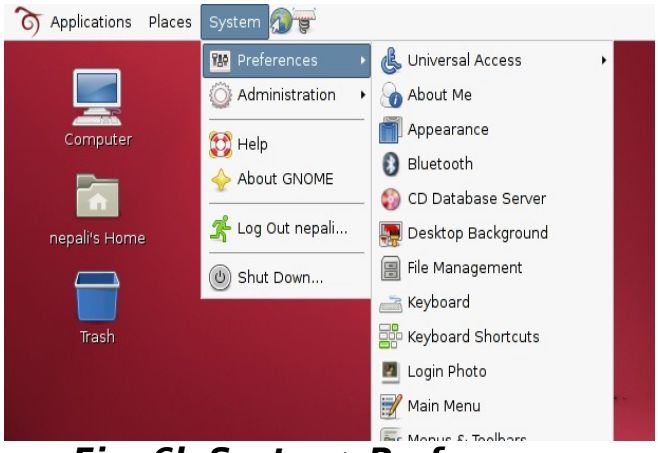

Fig. 6b System>Preferences

Quick Launch

The quick launch includes icons as shortcut to frequently used applications.

Fig.7 Quick Launch

We can manually add new quick launch (shortcuts) to the panel. To add shortcut icon to the desktop panel:

1. **Right-click** the blank area of the **top panel** (also applicable for bottom panel) and click **Add to Panel.** The Add to Panel dialogue box appears.
2. The Add to Panel dialogue box displays a list of applications available on your computer. Select an application and click **Add** to add it to the blank area of the desktop. If you want to launch the programs available on the **Applications** menu, click **Application Launcher**.
3. The applications grouped in a category similar to the Applications menu appears. Select an application from the available list, and click **Add**.

*Note: Alternatively, you can drag an application icon from the **Add to Panel** dialogue box and drop the icon on the panel to create a shortcut to the application. Or, right click on any applications in **Applications** menu and click on **add this launcher to panel** to add shortcut.*

Notification Area

Notification Area is a area in right hand side of top panel notifying updates, volume, running applications like messenger, music player, etc.

Fig.8 Notification area

Date and Time

Date and Time are displayed on the top right corner of the gnome panel by default. Clock type can be changed between 12 hours system and 24 hours system, just right click over the date and time area and select preferences. Date and time can be adjusted in the similar manner.

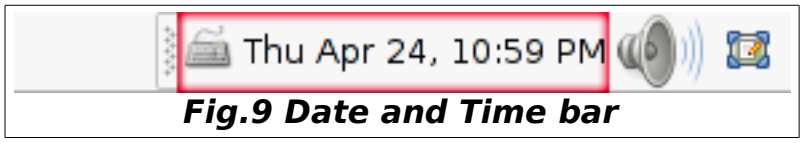

Fig.9 Date and Time bar

Window selector

The window selector displayed in the extreme right of top panel allows the user to select available windows as active window. The selected window is displayed on the top of other windows.

Fig.10 Window selector

The bottom panel of Gnome desktop environment contains show-desktop, taskbar and workspace switcher by default.

Fig.11 Bottom panel

Show Desktop

First icon on the bottom panel provides quick access to the desktop. If multiple windows are open on the desktop and you would like to minimize all of them together, click this icon. Clicking again will display the windows in their original state, before you minimized them.

Fig.12 Show Desktop

Task bar

The task bar is an applet which shows you the titles of running applications on the desktop. When you open an application, it's listed on this area for easy access.

Fig.13 Taskbar

Workspaces

You can subdivide the GNOME Desktop into separate workspaces. A workspace is a discrete area where you can work. workspace, enables you to split the windows that are open on your desktop into multiple workspaces. You can then navigate/switch among the workspaces by clicking on it. This reduces the clutter on your desktop and eases navigation between windows. There are four workspaces by default but you can specify the number of workspaces. To specify right click on workspace and click on preferences. The window appears where you can specify the number of workspaces you want.

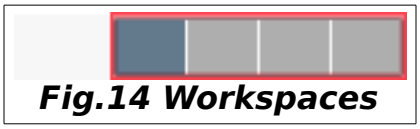

Fig.14 Workspaces

2.1.2 Desktop

The desktop is behind all of the other components. The desktop is an active component of the user interface. You can place objects on the desktop to quickly access your files and folders, or to start applications that you use often.

The desktop consist of background image. User can change desktop backgrounds by simply right clicking over the desktop area and selecting 'Change desktop background'. Available desktop backgrounds can be selected from the list appearing or you can browse the location of image file in the folders and select that particular background.

Fig.15 Nepalinux Desktop

The icons you can find in the Desktop are:

Computer

The computer is an directory which shows the disk partitions, CD Rom, floppy drive and network. If you insert any usb drives then it will be automatically mounted and shown here as an icon.

User's Home

Home icon is a shortcut to user's directory. It contains the documents created by that particular user. By default, this directory is protected by permission to read and write only by that user and can be read by other users. But the user can change permission type.

Trash

The files that you delete are stored in the Trash, which is similar to the Recycle Bin of Microsoft Windows. It contains the files you deleted on your computer. To empty the Trash, right click the Trash icon on the Desktop and click Empty Trash. Right-click the icon and click Open to open the Trash window. If you want to restore the deleted item to the desktop, drag that item to the desktop from the Trash window before you make it empty.

NepaLinux Official Website

This icon links to the Nepalinux web page stored in the computer. When you click the icon, default web browser opens the page.

Disk

This icon only appears if you plug in the cd/dvd disk or usb flash drive. The automatically mounted drive icon appears here for quick access.

2.1.3 Nautilus file manager

Nautilus is the default file manager in gnome. When you click on any directory

icon, nautilus is started. With nautilus, you can view your files and folders as icons or as a list. Besides, you can also create, move, copy, rename, and remove files and folders. You can move files between folders by opening up two or more file manager windows and dragging the files from one window to the other.

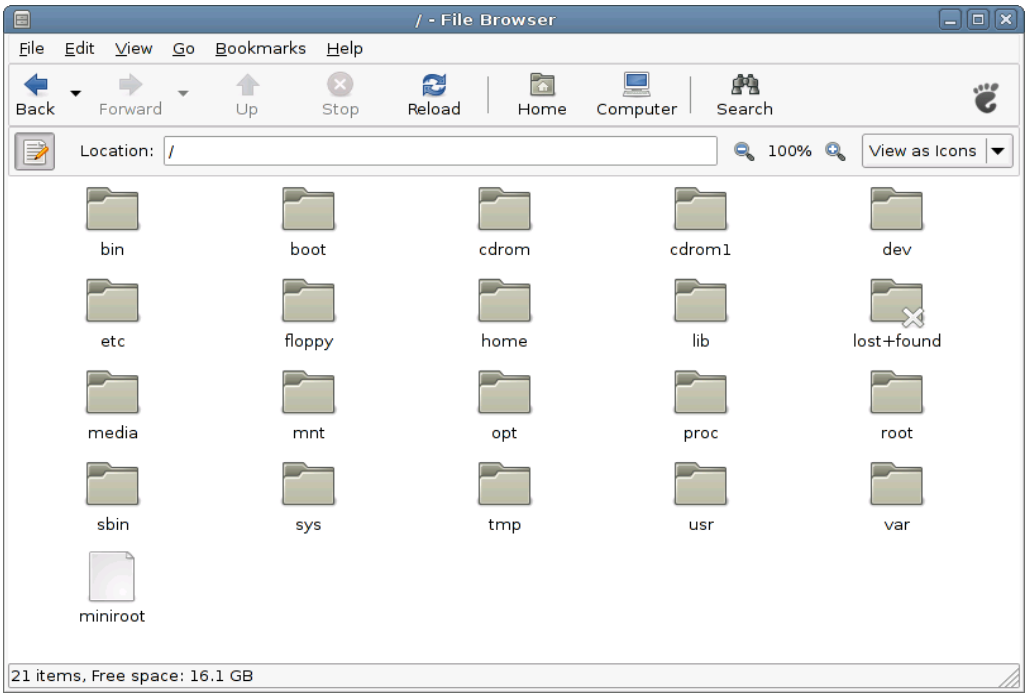

Fig.16 Nautilus File Manager

2.2 Logging in / Logging Out

Logging in

When you start the computer and boot Nepalinux, after some time, the login screen appears. At the login screen, you are asked to enter the **username** by which you wish to log in to the computer. When you enter the username, you are asked to enter the **password.**
If you want to change the language of the session you can choose it from the language menu in the login screen.

You cannot login as 'root' by default. If you want to login as user 'root',go to Actions Configure the login Manager. It will ask the 'root' password that is created at the time of installation. Then go to Security and check "Allow root to Login with GDM".Click the close button and login with root. Remember, 'root' is the super user and unless required do not login with user 'root'.

Logging out

In order to logout,Go to **System** Menu and click **Log out** in the top menu panel. Check "Save current setup" to save the currently active applications to be run by default at the next login and select "Log out".Finally press "OK" button to log out. Alternatively you can press CTRL+ALT+BACKSPACE together to log out easily.

Shutdown and Restart the system:

To restart or shutdown the system:Go to **System** menu and click on **shutdown** you are then asked to shutdown or restart you system.

3. Directory structure: an overview

The objective of this section is to familiarize the user with Linux directory structure. In this section you will know about:

- Basic introduction to directory structure in Linux.

The Linux file system consist of various directories bearing some responsibilities. The most essential directories and their responsibilities are briefly explained below:

1. **/** : This is the main Linux directory. It consist of all directories mentioned below and even few more which are not required at this point.
2. **boot** : This directory is responsible for booting Linux system.
3. **etc** : This directory contains configuration files.
4. **home:** Home contains single directory for each user.
5. **Media**: It contains directories where the hard-disk partitions, cdrom, floppy, usb drives are mounted.
6. **Usr:** contains the programs installed in the Linux system. If any user installs new applications, it is stored within this directory.

There are other directories in / but its not necessary or required at this stage.

4. Using Applications

The objective of this section is to familiarize the user to the applications that comes pre-installed with Nepalinux3.0. In this section you will know about:

- Using office Packages
- Using Internet
- Using applications for Photos and Graphics
- Using Applications for Music and Videos
- Using tools available under Accessories

The newly installed Nepalinux 3.0 comes with multifarious applications bundled in a single suite. The most necessary applications for general desktop users could be easily access from the menu.

4.1 Office

The office suite installed along with Nepalinux is Localized OpenOffice.org suite developed by Sun Microsystems. This suite is an alternative to Microsoft (MS) office package for Windows.

Nepali OpenOffice.org (OOo) is a complete office suite in Nepali, featuring a word processor (Writer), a spreadsheet application (Calc), and presentation software (Impress). Besides these fundamental office applications, OOo also includes a vector drawing tool (Draw), database access program, publication of documents in the Portable Document Format (PDF) and presentations in the Flash (SWF) format. The OOo package is fully inter-operable with the Microsoft Office suite.

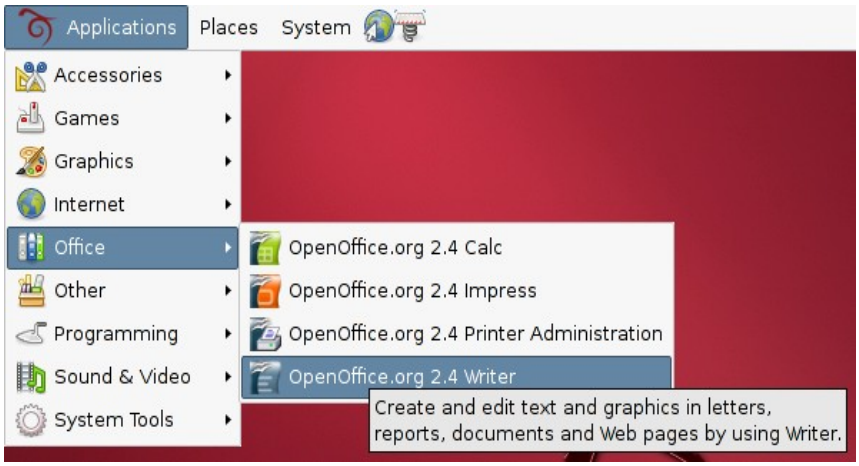

Fig.17 Applications menu>Office

The general introduction of each applications in Ooo suite are given below:

4.1.1OpenOffice.org Writer

This is a powerful tool for creating professional documents, reports, newsletters and so on – it is a word processor that allows easy integration of charts and pictures, as well as other OpenOffice.org compatible documents. It can create anything from a simple letter to books, with professional layouts, making use of styles.

The OpenOffice.org Writer can be launched by clicking on **Applications** menu, and point to **office** and click on **OpenOffice.org Writer**.

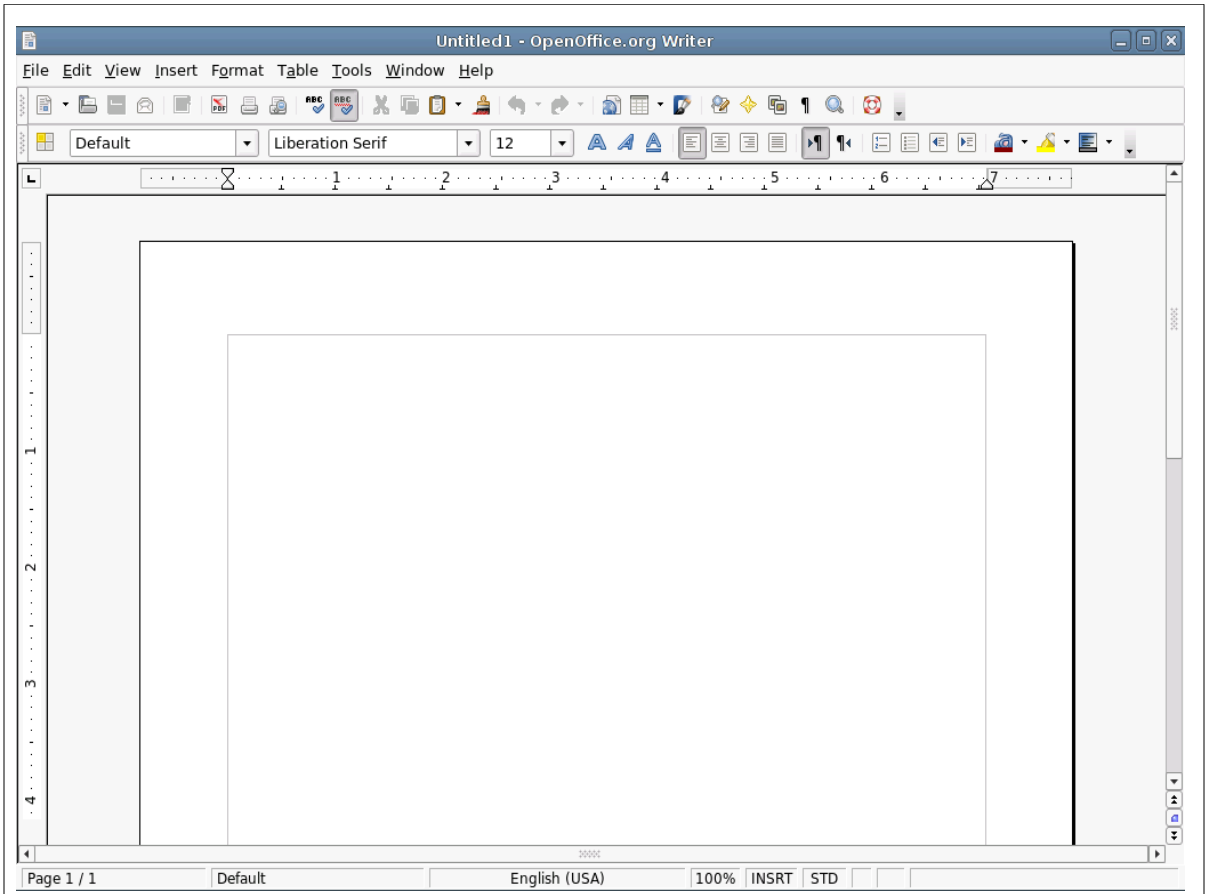

Fig.18 OpenOffice.org Writer Screenshot

Common Functions

Functions of the word processor can be controlled via the toolbars located at the top of the screen. On the first row, file actions like opening, saving, editing(cut, copy, paste), undoing/redoing, inserting tables, etc. can be performed, while on the second row, changing the font, size, style (bold, underline, or italics), font color, highlighter, etc are located. Additional toolbars can be added by going to **view** menu, pointing to **toolbars** and clicking on required toolbar.

They can also be controlled by the menus that are common through packages:

i. For creating a new empty, untitled document for you to work, click on **File** menu, point **New** and click **Text Document**.
ii. For opening an existing file, click on **File** menu, click **Open.**
iii. For closing the document you are working on click **File** menu, click **Close**. If changes have been made since your last save, you will be prompted to save or discard those changes.
iv. For saving the document you are currently working on, Click on **File** menu, and click **Save**. If you are saving the document for the first time, the save window will appear asking you to type the document name in some location in the computer. The default location is home directory of that particular user.
v. In order to save an updated version of the document in a different location

or by another name, click on **File** menu, point to **Save As** and click on it.

Common Operations

i. To copy text, Select the text with the mouse, then click on **Edit** menu, point to **Copy** and click on it. The selected text is kept in memory for use elsewhere. Alternatively, press **Ctrl**+**c** from keyboard to copy.
ii. To paste text, Find the place where the text needs to be placed, put the cursor there, and then Click on **Edit** menu, point to **Paste** and click on it. Alternatively, press **Ctrl**+**v** from keyboard on that position.
iii. To cut text: This means that the selected text will be removed from the current location and kept in memory, to be placed elsewhere. Doing this is exactly like how a copy should be performed, except clicking on **Edit** menu, pointing to **Cut** and clicking on it instead. Alternatively, press **Ctrl**+**x** from keyboard to cut.
iv. To undo an action: Click on **Edit** menu, point to and click on **Undo**. It will display the operation that it is undoing at the moment. Alternatively, press **Ctrl+z** to undo.

For browsing the menu, there are also keyboard shortcuts located next to it. When you start using the applications proficiently, it is much quicker to use keyboard shortcuts like **Control+C** for Copy, and so on.

Formatting

Some of the quick formatting options are bold, italics and underline. These options are available at the toolbar at the top of the screen.

Text alignment plays a large role in controlling how portions of the document will look. For example, an address field at the top of your letter will have such details right-aligned, while the body and rest of the base text will be left-aligned. There are four-icons that are located next to the bold/italics/underline icons, providing options such as: right-align, centre-align, left-align and justified.

You can also highlight text and/or its background (like you would with a highlighter and paper!), and change the font and/or background colours all with the icons there.

Fonts

Changing the font, size, and style (bold, underline, or italics) are located in the second row. This can be done by highlighting the desired text and clicking the appropriate button.

Others

Writer has a built-in spell checker. This can be accessed by clicking on **Tools** menu and clicking on **Spellcheck**. The option to auto-spellcheck means that while typing, Writer will dynamically check your spelling, and if it detects an error, it will output a red-line at the bottom of the misspelled word. Keep in mind that the spell checking is based on the current language that is in use. This can be changed by clicking on **Tools** menu then **Options .** The Option windows appears.

choose **Language Settings** on the left hand side and click on **languages.**

Nepali Thesaurus can be found by highlighting the word and pressing **Ctrl+F7** key.

Help Note: If you have used Microsoft Office and wish to use OpenOffice.org from now on, you can refer to a guide - **OpenOffice.org Writer for Microsoft Word users :How to perform common tasks**
Link to the document:
http://documentation.openoffice.org/HOW_TO/word_processing/Word-to-OOo.html

4.1.2 OpenOffice.org Calc

This is the spreadsheet component of the OpenOffice.org package, and contains many useful features, including an array of functions and plenty of charting options. It is fully inter-operable with Microsoft Excel, though the function separators differ in the two packages.

The OpenOffice.org Calc can be launched by clicking on **Applications** menu, and point to **office** and click on **OpenOffice.org Calc**.

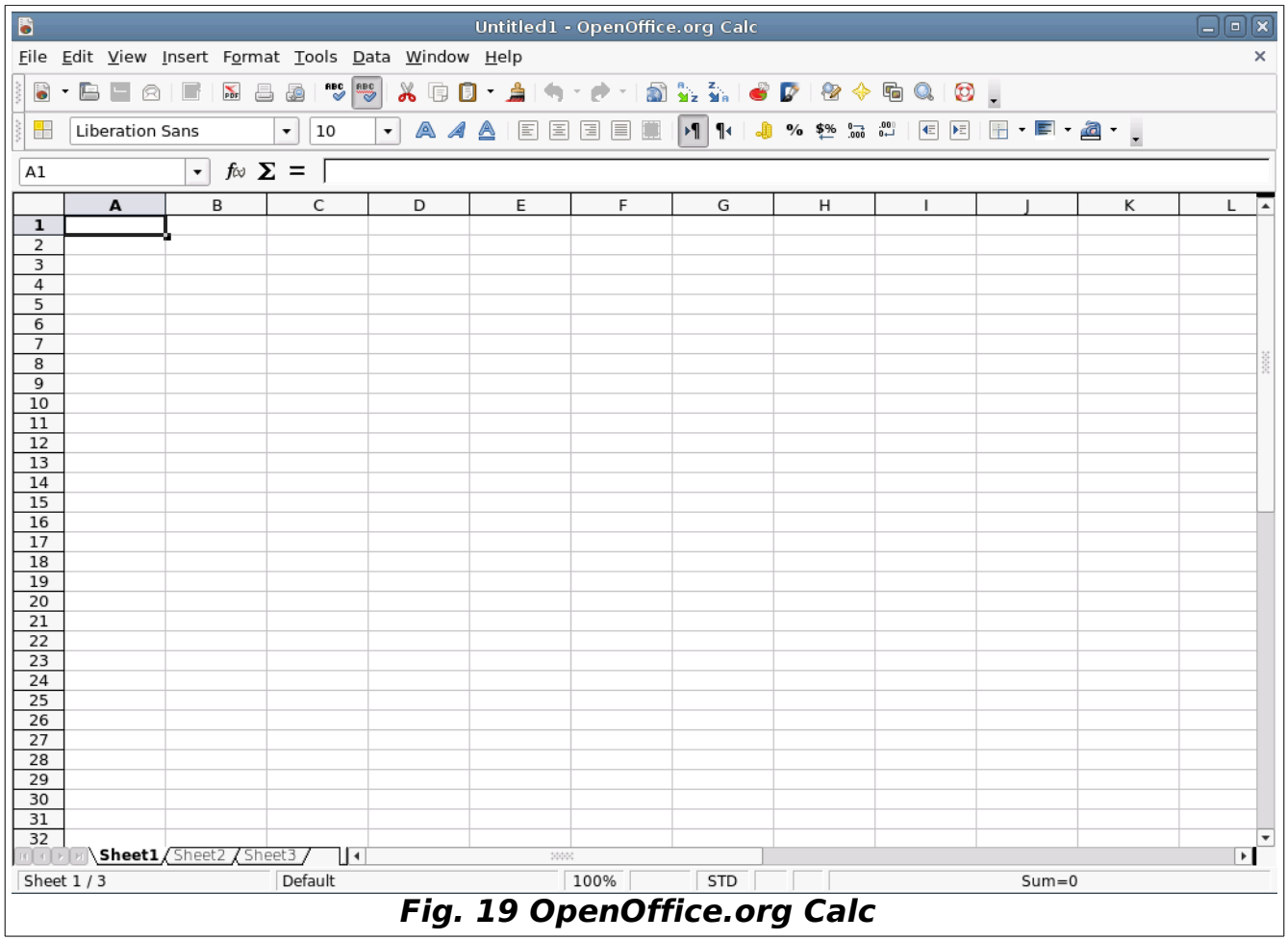

Fig. 19 OpenOffice.org Calc

Or if you already have an existing window of OpenOffice.org, click on **File** menu, point to **New** and click on **Spreadsheet**.

Spreadsheets contain many rows and columns, and each row and column combination is called a cell (like A1, B4, and so on). Upon inputting text into a cell, you might realize that the text is wider than the cell allows – this can be re-sized via right-clicking the cell, and selecting the Format Cells option. Then under the Alignment tab, selecting Line Break is what is required.

Formatting

If there is some information that has already been created, and the area should be formatted, one particular quick and easy option would be to use the AutoFormats available in Calc. This
is done after selecting the area and then opting for:

On **Format** menu, click on **AutoFormat**

These are pre-defined styles that are available in Calc, and if you have created your own particular style, you can add them into your new AutoFormats.

In the object toolbar, there is an option to set the font colour within the cell. There are also options to increase/decrease the indents within a cell, and in the image below, controls for enabling:

- Currency
- Percentage
- Add/Remove significant decimal places

These are quick controls, and accessing them is as simple as clicking the icons that represent them, and automatically the cell will be formatted as stated. Not only can the borders be set easily, and cell backgrounds too, but the alignment of text within a cell can also be set. This can be either as top aligned, centre aligned, or bottom aligned.

Sorting

A big part of dealing with spreadsheets involves a lot of sorting and filtering of data. To sort a dataset, selecting the active cells, then on **Data** menu, click on **Sort.** It will call a pop-up dialogue that has options for sorting the data based on the columns present, as well as if the data should be ascending or descending.

4.1.3 OpenOffice.org Impress

No office suite is complete without a presentation piece, and OpenOffice.org shows its colours with Impress, the presentation piece in the suite. To get started with IMPRESS you need to opt the following:

Go to **Applications** Menu in the menu bar, point to **Office** and click **OpenOffice.org Impress**

or if you already have an OpenOffice.org window open, its available at

Go to **File** menu of OpenOffice.org window , then point **New**, and click **Presentation**

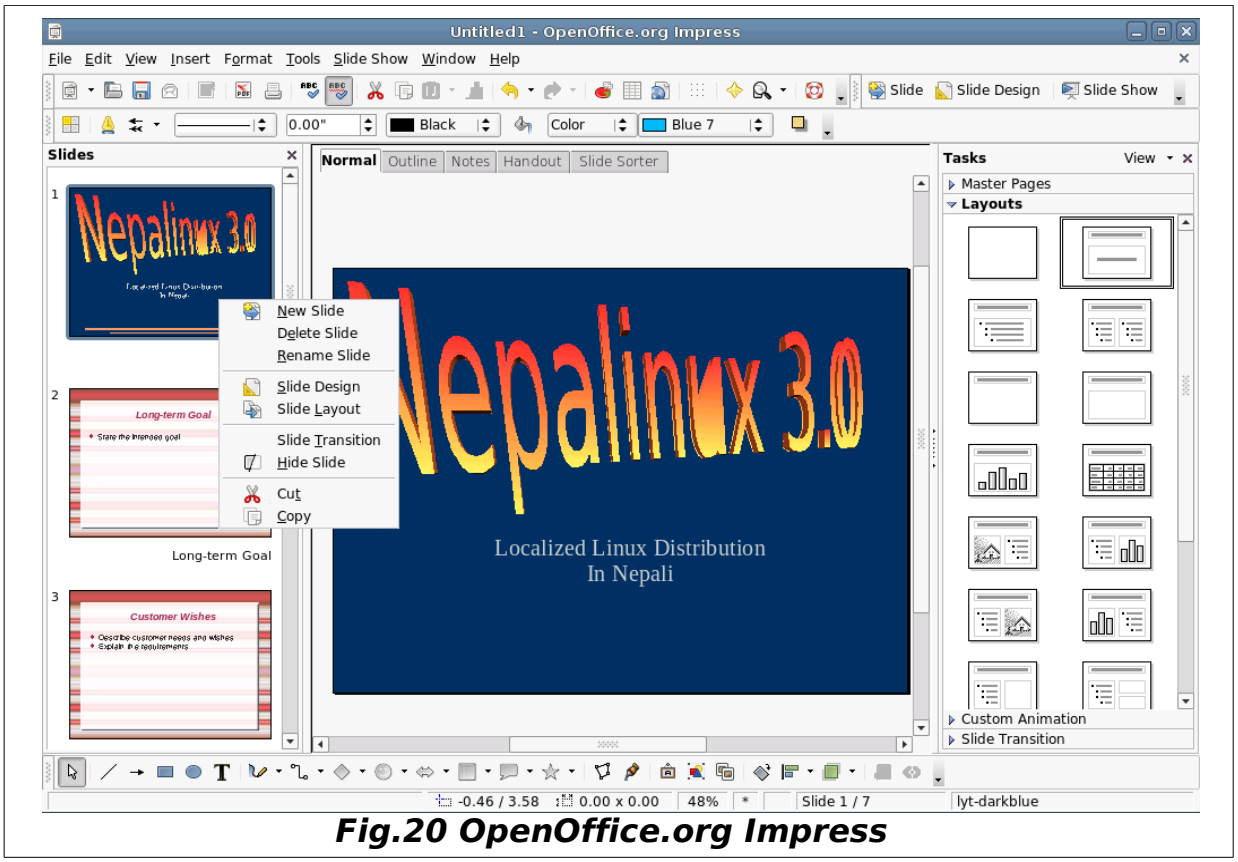

Fig.20 OpenOffice.org Impress

Unlike other components of OpenOffice.org, when you start Impress, you are presented with an AutoPilot, to start creating your presentation! This gives you options to start a presentation with an empty template, or even with one of the pre-defined templates. A preview dialogue is available, and once all options are selected (and Next is clicked, to move on), you get a basic presentation.

Views

There are several views in Impress, and some have overlapping names, but with different functionality! Just above the scroll bars, you'll notice five buttons that look like what you see below.

The five options for workspace views are:

- Normal view – normal look of the presentation
- Outline view – overlook of the presentation.
- Notes view – add speaker notes.
- Handout view – how handouts get printed.
- Slide Sorter – birds eye view to add, change, switch slides around.

All the views can also be accessed via **View menu,** clicking on **Workspace.**

It is also worthwhile to note that at the bottom-left-hand corner of your screen, where the slide tabs are displayed, there are more views to know about. You are typically located in the Slide View (same name as above, but different functionality since its on a different bar!)

However, Master Views are supported and to access this view, it is the second button from the left. You can have master views of all workspace views (i.e. a master view of the slide itself, notes, and handouts). The Layer view allows layering of slides (adding and removing), and layers can be non-printing or non-displayed on screen, but printing only.

4.2 Internet

In this Chapter, you will know about:
• Connecting to the Internet
• Browsing the Web
• Sending and receiving e-mail messages
• Using various tools for instant messaging
• Making phone calls

4.2.1 Connecting to and Using the Internet

The Internet is used daily by millions of people for work and entertainment. Searching for information all over the world, corresponding with friends and relatives, participating in discussion forums, reading the news, playing games, has never been easier... or more accessible.

The means of connecting to the Internet is not always a choice and depends greatly on where you live and/or work and the surrounding infrastructure. The pre-requisites to connect to the Internet are an Internet Service Provider (ISP) subscription and a functional Internet connection in your area. Configuring the Internet connection requires minimal involvement from you. Nepalinux supports most connection types, this lesson will cover: Broadband (cable or ASDL), dial-up and direct access through Local Area Network (LAN).

Broadband connections are fast and reliable connections that users subscribe to for a fixed monthly fee. Broadband companies offer packages with different speed specifications and bandwidth limits. If you travel and need Internet access, you can purchase a wireless Internet connection. If your computer does not have one pre-installed, you will need to install a wireless card. This connection is similar to a satellite connection, where data is transmitted through the airwaves.

Dial-up access uses the same lines as your phone connection, except that the parties at the two ends are computers. This is a slow and cheap connection that uses a phone line to connect to a local server. Your computer dials a phone number that is provided by your ISP and connects to the server. Consequently, you cannot make phone calls while you are connected to the Internet.

1. **Using Cable Connections:**

   To connect to the Internet using a cable connection:
   a) On the **System** menu, point to **Administration** and click **Networking**. The Network Settings dialog box will be displayed.

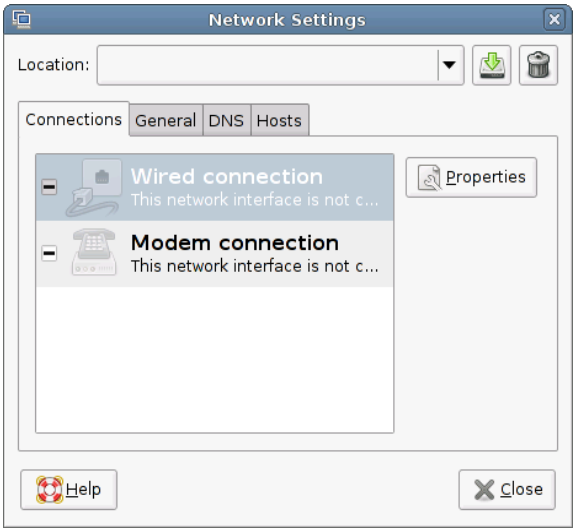

Fig.21 Network Setting dialog box

b) On the Connections page, select the connection to use. Click **Properties**. The eth0 Properties dialog box will be displayed.

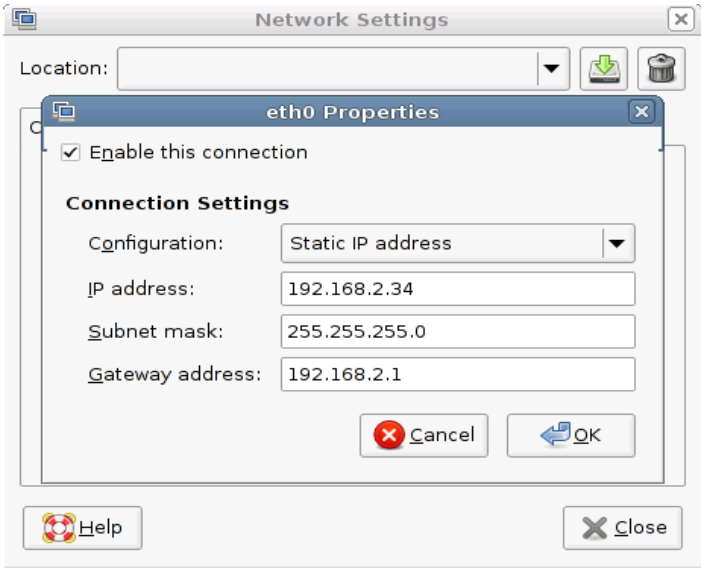

Fig.22 Ethernet device properties dialog box

c) Clear the **Enable roaming mode** check box to enable the connection.
d) In the Configuration box, select the **Static IP address** option.
e) Type the **IP address** of your computer in the **IP address** box.
f) Type the **subnetwork (subnet) mask** of your computer's IP address in the **Subnet mask** box.
g) Type the **IP address** of your ISP in the **Gateway** address box.
h) Click **OK** to complete the configuration for the cable connection.

Now, you can connect to the Internet by using the cable.

2. Using Wireless Card

Nepalinux automatically detects support for various wireless cards. To determine whether Nepalinux supports the wireless card on your computer:

a. On the **System** menu, point to **Administration** and then click **Networking**. The Network Settings dialogue box will be displayed.

Fig.23 Network Setting dialog box showing wireless device

b. If the wireless card on your computer is listed, you can use the same procedure as listed in the Using Cable Connection section to connect to the Internet.

If the wireless card is not listed, you may have to contact your vendor for support.

3. Using dial-up connection

A dial-up connection uses a modem to connect to the Internet. The type of modem used for dial-up connections are:

i. Universal Serial Bus(USB)/Serial bus or External modem
ii. Peripheral Component Interconnect (PCI) or internal modem
iii. CDMA Phone Modem

i. External Modem (USB)

1. Connect the modem to serial port of your computer
2. Run Applications-->Internet-->GNOME PPP

3. Click Setup-->Detect
4. If your modem is not detected, select the appropriate one at Device. If your modem is connected to com2 of your computer select /dev/ttyS1.
5. Click Close
6. Type username, password and phone number of you ISP and click connect.

ii. Internal Modem (PCI)

1. Click Applications-->Internet-->Gnome PPP
2. Under Modem Tab, Click 'Detect'. This will automatically detect the connected modem.
3. Finally in the Gnome PPP application type username , password and phone no and Click 'Remember Password'
4. Click 'Connect' to use the Internet.

iii. CDMA phone

1. Click Applications-->Internet-->Gnome PPP
2. Click **Setup**
3. Under Modem Tab, Click **Detect** by choosing /dev/ttyS0 or /dev/ttyS1 in Device menu whatever will be appropriate for your CDMA.
4. After few seconds your CDMA will be detected.
5. Now click on **Init Strings** button
6. Double click on **Init2** and provide the **extra initialization commands** (note:you can find the extra initialization commands in the CDMA phone manual)
7. After that click the Close Bold text button.
8. Finally in the Gnome PPP application type username , password and phone no
9. Click 'Remember Password'
10. Click 'Connect' to use the internet.

(Note:FOR NTC CDMA phone Init Strings value is

at+fclass=0;at+crm=2;at$qcmdr=3;)

4.2.2 Browsing The web

Iceweasel is the default web browsing client on Nepalinux. To open a Iceweasel Web browser, on the Applications menu, point to Internet and click Iceweasel Web Browser.

About: - Iceweasel
File Edit View History Bookmarks Tools Help
about:
Google
Getting Started
Latest Headlines
iceweasel
version 2.0.0.12
Copyright © 1998-2008 by contributors to the Mozilla Project.
Read the licensing information for this product.
Read the Debian README file for this package.
See the Debian bug reports for this package.
See the build configuration used for this version.
Build identifier: Mozilla/5.0 (X11; U; Linux i686; en-US; rv:1.8.1.12) Gecko/2008012901 Iceweasel/2.0.0.12 (Debian-2.0.0.12-1)
Done

Fig.24 Iceweasel Web browser

In addition to typical Web browser features, Ice includes two powerful features that make your online experience more productive – an integrated search system and live bookmarking

Integrated Search

Iceweasel includes an integrated search feature that enables you to search for and find any information. The Search bar comes pre-loaded with search engines for Google, Yahoo!, Amazon, eBay, Answers.com and Creative Commons. You can enter a search term in the Search bar and receive immediate answers from the search engine you choose. You can select a new search engine from the Search bar menu at any time and add search engines from favourite Web sites.

Search Suggestions

To further ease your search-related tasks, some search engines such as Google, Yahoo and Answers.com in Iceweasel , suggest search terms. Begin typing into the Search bar and a list of suggestions will appear.
For example, if you type king in the Search bar, a list of suggestions to complete your search keyword is displayed. So instead of typing the complete term, you can select the required term from the list. This makes

the search easy and quick. The following graphic shows a list of suggestions, when you start typing in the Search bar:

Live Bookmarks

If you come across an interesting Web site over the Internet and would like to keep it for future reference, without trying to remember the URL, create a bookmark. The next time you are online, simply click the link to go to that Web page. You can view Web feeds such as news and blog headlines in the bookmarks toolbar or menu. A Web feed or feed is an XML Web page that contains a list of links to other Web pages. You can quickly review the latest headlines from your favourite sites and click to go directly to chapters of interest.

To create a live bookmark in Iceweasel :

1. Open the **Iceweasel Web browser**. On the **Bookmarks** menu, click Organize **Bookmarks**. The Bookmarks Manager window will be displayed.

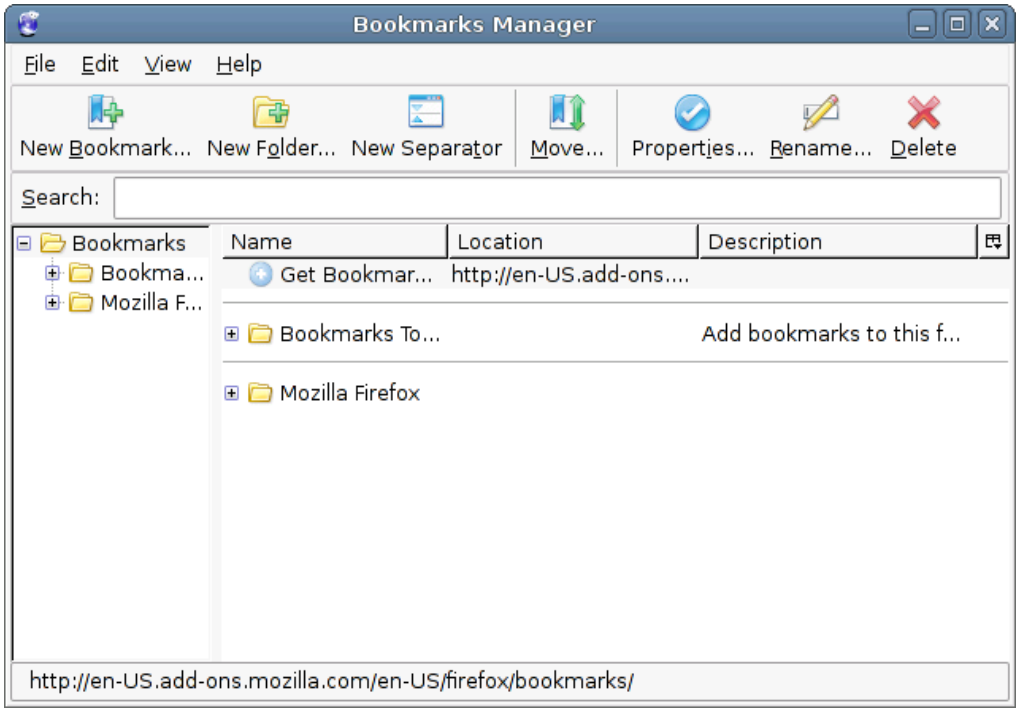

Fig.25 Organizing Bookmarks

2. On the **File** menu, click **New Live Bookmark**. The Properties for New Bookmark dialogue box will be displayed.

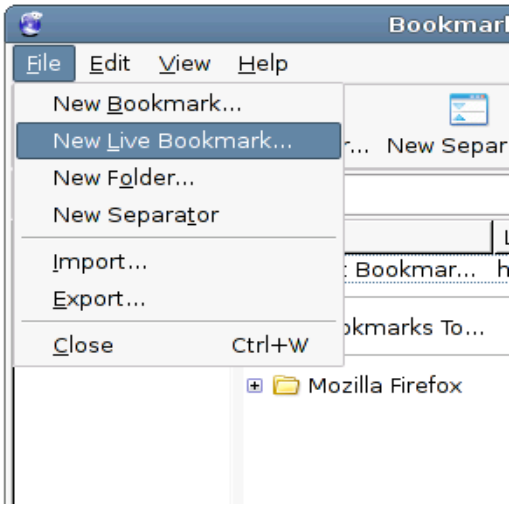

Fig.26 Adding Live Bookmarks

3. In the **Name** box, type the name you want to give to the feed. Make sure that the name reflects the contents of the Web site and includes enough information to uniquely identify the data file. Type the **feed location**-the URL of the feed in the **Feed Location** box and the description of the feed in the Description box. If you want, you can skip giving the description, though these can be used to categorize various feeds under groups. Click **OK** and close the Bookmarks Manager window. This sets the bookmark.

4. In the Iceweasel Web browser, on the **Bookmarks** menu, point to **New Live Bookmark**. This displays the list of feeds, their respective locations and description. To locate the one you are looking for, you can sort this list on name, location or description. Just click the one you want to quickly browse through. It opens in the Iceweasel window.

4.2.3 Sending and Receiving E-mails

Icedove is the mail client pre-installed in Nepalinux 3.0. Apart from email, Icedove can be used for access to newsgroup, RSS feed and blogs. Icedove can be launched from **Applications** Menu, point to **internet** and click on **Icedove Mail Client.**

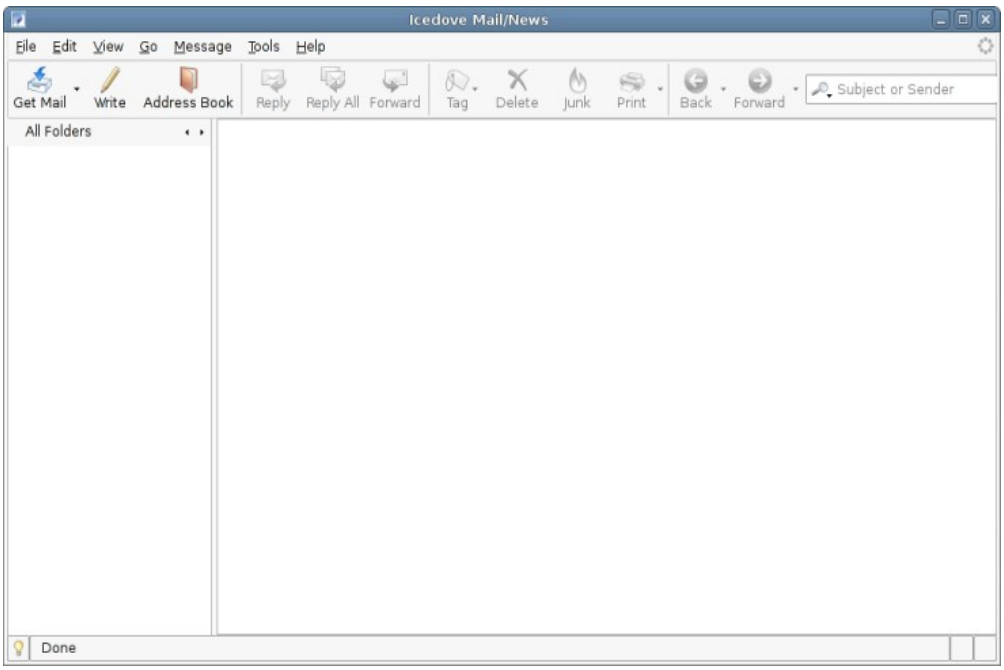

Fig.27 Icedove Mail Client

On first launch, you have to configure Icedove for your account. The steps for configuring Icedove has been given below:

1. When you open Thunderbird for the first time, the **Account Wizard** helps you to configure an account. On the New Account Setup page, select **Email account** option and click **Next**. This page informs you about how this wizard will collect information to set up a mail or a newsgroup account.
2. On the **Identity page**, in the **Your Name** box, type your name that you would like to use when sending messages and in the **Email Address** box, type the e-mail address where you would like others to send you e-mail messages. Click **Next**.
3. On the **Server Information** page, select the type of incoming server (**POP** or **IMAP**) and type the name of your incoming server in the **Incoming Server** box. In the checkbox, you can **uncheck** if you wish to use local folder to store mails from that account instead of own email directory. Type the outgoing server address in the **Outgoing Server** box.
4. On the **User Names** page, confirm your name in **Incoming User Name** box and Outgoing User **Name** box. Click **Next**.
5. On the **Account Name** page, type the name by which you would like to

refer to the account in the **Account Name** box. Examples are illustrated in the **Account Name** page. Click **Next**.

6. On the **Congratulations!** page, verify the information you have given. If anything is incorrect, browse previous pages by clicking **Back.** If everything is correct proceed forward by clicking **Finish.**
7. **Alert** dialog box appears. click **OK** and wait for sometime while being connected.
8. **Enter your password** dialog appears. Type your password and click **OK**.
9. The Icedove will download your emails to the directory in your computer which can be accessed from the navigation frame on left hand side and top middle frame of the Icedove application. The email content can be seen on bottom middle frame.

For Receiving emails

1. Check in the toolbar for **Get Mail** button. click on the button to get all your emails.

   Note: If you have multiple accounts added, then you can select to download email from specific account by clicking on **drop down arrow** next to **Get Mail.** The menu pop-ups giving you the list of accounts available.

   Alternatively, you can go to **File** menu, point to **Get New Messages for** and click on appropriate account or **Get All New Messages.**

For Composing/Sending emails

1. Click on **Write** button on the toolbar. **Compose** window appears. Fill the fields and click on **Send** button to send email.

   Note: a) If you have to send email to multiple people, type their email address in **To** field. Only one email address is allowed in each line. b) If you have added contacts to your account, access them by clicking on **Contacts** button in the tool-bar.

   Similarly you can check the spellings, attach any files, digitally sign and save as a draft from proceeding buttons in the toolbar.

4.2.4 Instant Messaging

E-mail message is not expected to be real-time, which means you can respond to it when time allows. But when 'Immediacy' is required, instant messaging (IM) is the way to go. The default instant messenger client on Nepalinux is Gaim, a cross-platform instant messenger that supports various popular IM network protocols. Using Gaim, you can communicate with people who use **America Online (AOL) Instant Messenger (AIM/ICQ)**, **GroupWise**, **IRC**, **Jabber**, **MSN**, and **Yahoo**. It allows you to list all your friends in one window. Gaim users can log on to multiple accounts on multiple IM networks simultaneously. This means that you can chat

with friends on AIM, talk to a friend on Yahoo Messenger, and sit in an IRC channel, all at the same time. Gaim supports many features of the various networks, such as file transfer, away messages, typing notification, and MSN window closing notification. A few popular features are Buddy Pounces, which give the ability to notify you, send a message, play a sound or run a program when a specific buddy goes away, signs online or returns from idle.

To connect to an existing e-mail account using the Gaim instant messenger, perform the following steps:

1. On the **Applications** menu, point to **Internet** and click **Gaim Internet Messenger**. The Accounts dialogue box with a welcome message will be displayed.

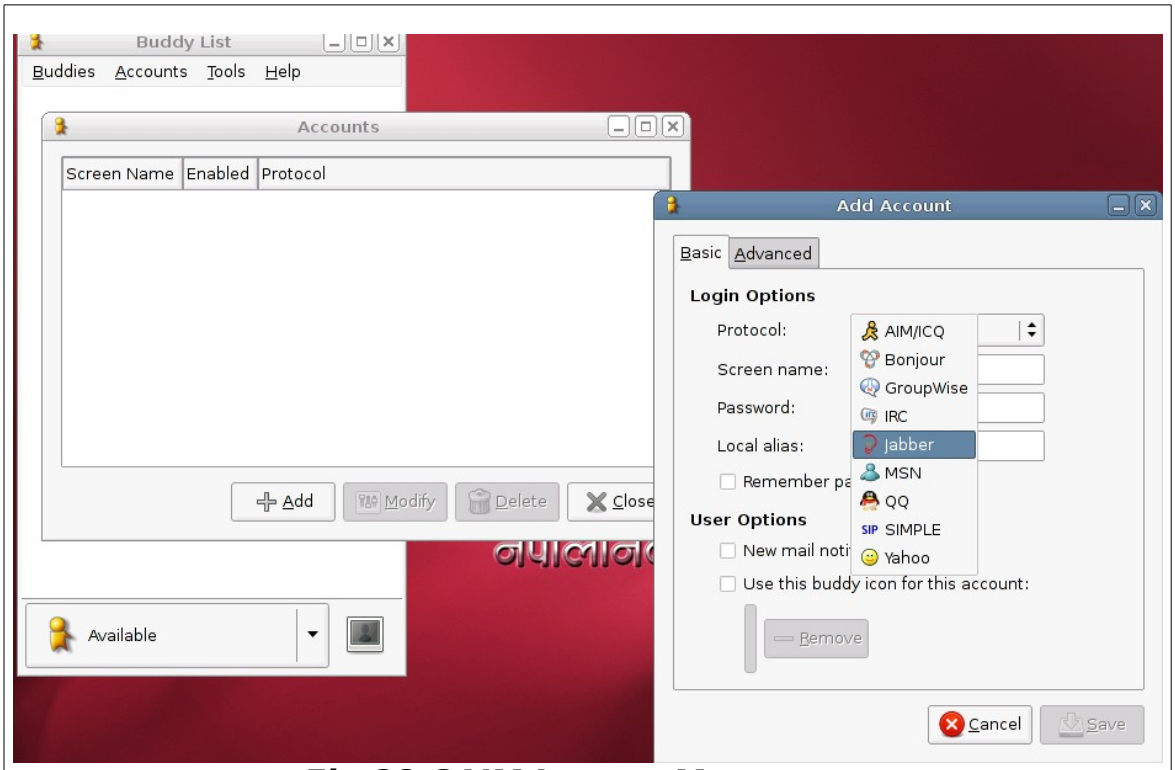

Fig.28 GAIM Instant Messenger

2. Click **Add** to configure your any existing e-mail account on Gaim. The Add Account dialogue box will be displayed.
3. In the Add Account dialogue box, select the **protocol**, which is your e-mail account server name from the Protocol box. The protocol is the name of the server you want to use for chat. Type your selected protocol's e-mail id in the Screen name box and the corresponding password. Type your nick name that you would like to be known by while chatting in the Local alias box. Click Save to create the account. The Accounts window will be displayed.
4. You can see the newly created account with a check mark indicating that it is active in the Accounts window. Click **Close**.

   Note: If you want to add another e-mail account, click **Add** in the **Accounts**

window and perform steps 1-4.

5. Now, click the Gaim icon on the top panel of the desktop to view the Buddy List window for your current account.

Fig.29 Gaim Buddy List

4.2.5 X chat

Internet Relay Chat(IRC Client).
A live chat area of the Internet in which real-time conversations among two or more people take place via special software. Each specific IRC channel begins with a # and is dedicated to a different area of interest. IRC is considered another part of the technology of the Internet the same way FTP, Telnet and the Web are. The process is demonstrated below by connecting to the freenode IRC channel in Nepalinux.

Go to **Applications** menu, point **Internet** and click on **XChat IRC**

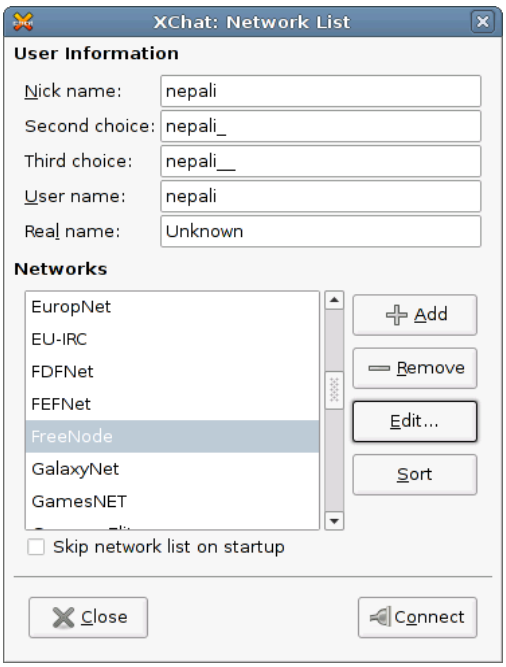

Fig.30 Xchat

Provide NickName and other choices and your Real name. Select the Network you want to join. Freenode provides discussion facilities for the Free and Open Source Software communities.

For joining the channel in the freenode, select FreeNode in the network list and click **edit**.

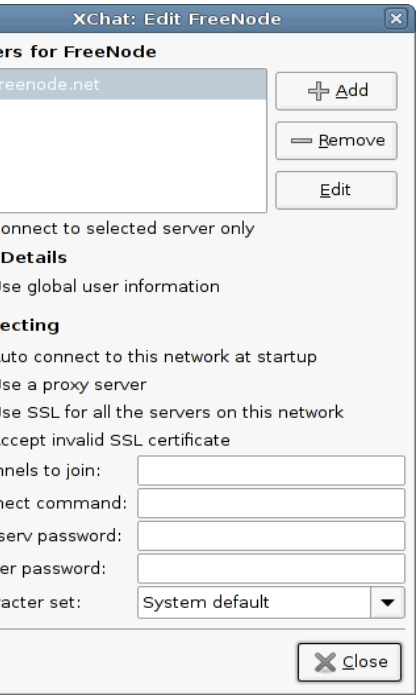

Fig.31 Xchat channel Edit dialog box

Add the channels beginning with the # sign and separated by commas for eg. #nepalinux, #foss-nepal #debian, #gnome, #ubuntu and so on.

Now you are in the online discussion Room.

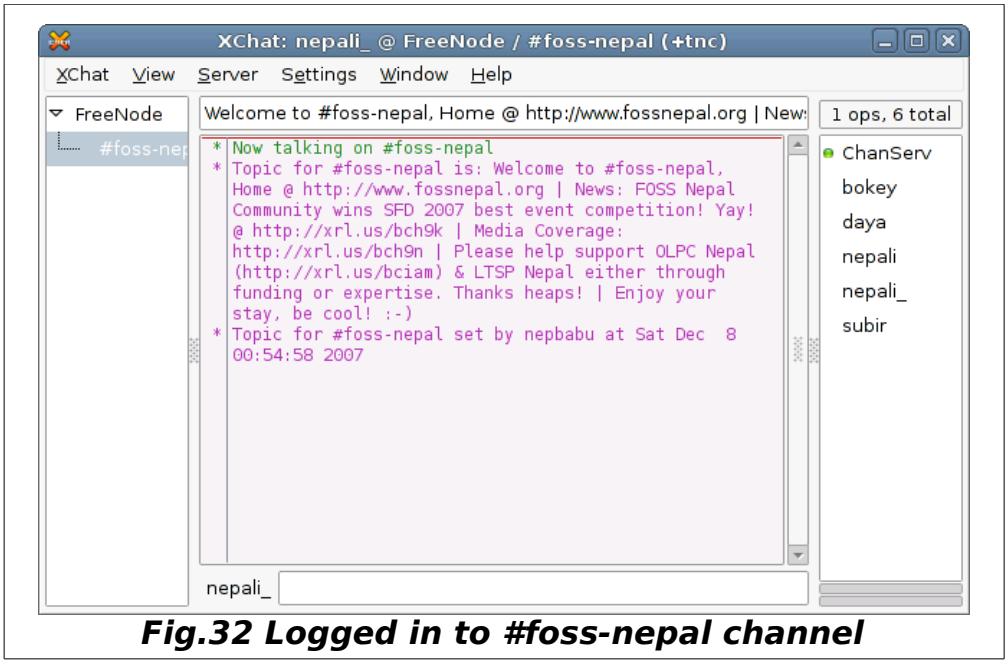
XChat: nepali_ @ FreeNode / #foss-nepal (+tnc)
XChat View Server Settings Window Help
FreeNode
#foss-nep
Welcome to #foss-nepal, Home @ http://www.fossnepal.org | New
1 ops, 6 total
* Now talking on #foss-nepal
* Topic for #foss-nepal is: Welcome to #foss-nepal, Home @ http://www.fossnepal.org | News: FOSS Nepal Community wins SFD 2007 best event competition! Yay! @ http://xrl.us/bch9k | Media Coverage: http://xrl.us/bch9n | Please help support OLPC Nepal (http://xrl.us/bciam) & LTSP Nepal either through funding or expertise. Thanks heaps! | Enjoy your stay, be cool! :-)
* Topic for #foss-nepal set by nepbabu at Sat Dec 8 00:54:58 2007
ChanServ
bokey
daya
nepali
nepali_
subir
nepali_

Fig.32 Logged in to #foss-nepal channel

Special Words used in IRC :

To change your nickname in IRC, type:
/nick <nick-name>

To register your Nick name so that it can't be used by anyone else, simply type:
/msg NickServ register <your_password>

For private talk with user xyz, type:
/query xyz

Sending message to individual user xyz in the discussion room, type:
xyz, <message>

To join new channel, type:
/join #<channel-name>

For the next time, provide NickServ password and Server password and Enable Auto Connect to this network at startup for the Auto login and startup.

4.2.6 Ekiga Softphone

Ekiga is an open source softphone application for Nepalinux. It is a free Voice over

IP (VoIP) and video conferencing application. VoIP routes voice conversations over the Internet or through any other IP-based network. You can use Ekiga to call, send instant messages and be contacted by other Ekiga users.

The First Time Configuration Assistant helps you configure Ekiga. It appears automatically when you open Ekiga for the first time. To configure Ekiga on Nepalinux:

1. On the **Applications** menu, point to **Internet** and click **Ekiga**. The Configuration Assistant page will be displayed. Click **Forward**.

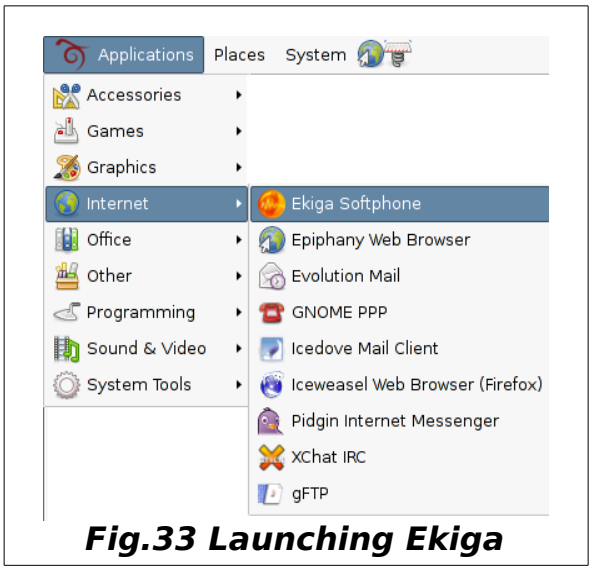

Fig.33 Launching Ekiga

2. On the **Personal Information** page, type your **full name** in the **Please enter your first name and your surname** box. The name that you specify is used for display purposes when you connect to other audio or video applications. Click **Forward**.

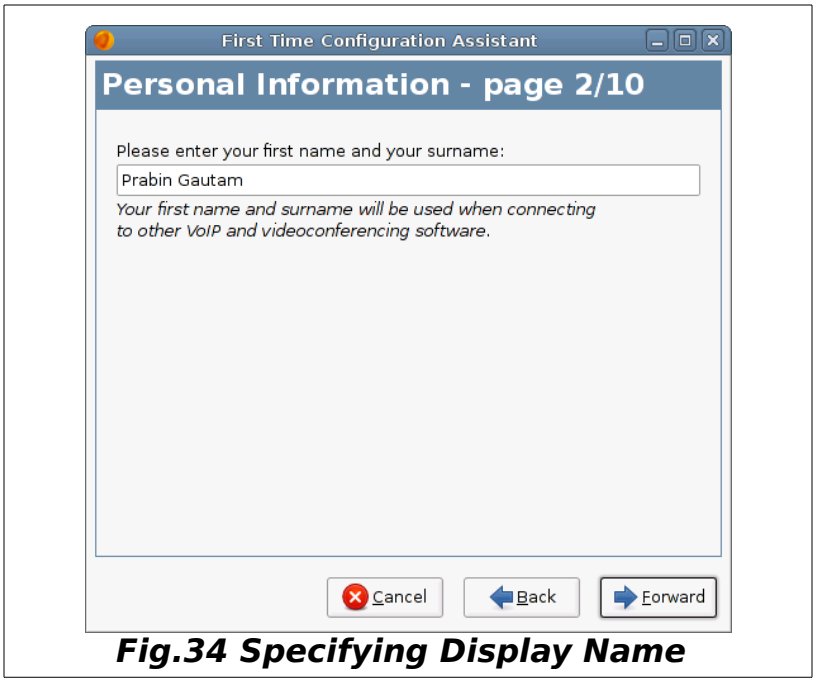
First Time Configuration Assistant
Personal Information - page 2/10
Please enter your first name and your surname:
Prabin Gautam
Your first name and surname will be used when connecting
to other VoIP and videoconferencing software.
Cancel
Back
Forward

Fig.34 Specifying Display Name

3. On the ekiga.net **Account** page, type your **Ekiga's account user name** and **password** that you use to log in to your existing Ekiga account. You will get this detail from the ekiga.net free SIP service. Click **Forward**.

First Time Configuration Assistant
ekiga.net Account - page 3/10
Please enter your username:
OpenLad
Please enter your password:
The username and password are used to login to your existing account at the ekiga.net free SIP service. If you do not have an ekiga.net SIP address yet, you may first create an account below. This will provide a SIP address that allows people to call you.
You may skip this step if you use an alternative SIP service, or if you would prefer to specify the login details later.
Get an ekiga.net SIP account
I do not want to sign up for the ekiga.net free service
Cancel
Back
Forward

Fig.35 Specifying ekiga.net Account Username and Password

Note:If you do not have an SIP account, you can click the link Get an ekiga.net SIP account on the page to create an SIP account on ekiga.net.

4. On the **Connection Type** page, select the **type of Internet connection** you are using on your computer from the **Please choose your connection type** box. This connection type determines the best quality settings that Ekiga will use during calls. If you do not know the connection type, contact your system administrator. Click **Forward**. You can change these settings later.

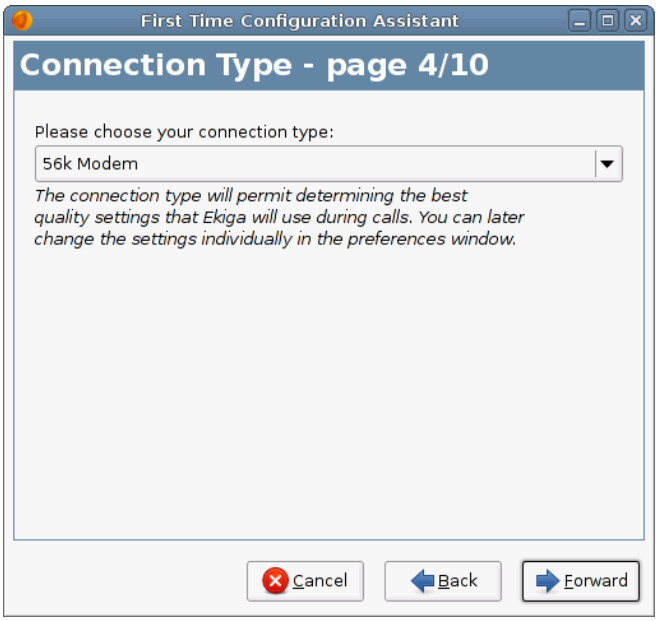
First Time Configuration Assistant
Connection Type - page 4/10
Please choose your connection type:
56k Modem
The connection type will permit determining the best quality settings that Ekiga will use during calls. You can later change the settings individually in the preferences window.
Cancel
Back
Forward

Fig.36 Selecting Connection Type

5. On the **NAT Type** page, click **Detect NAT Type**. It informs you which Network Address Translation (NAT) type was detected and automatically configures Ekiga to transparently cross your router. So, NAT avoids all the problems associated with reserving IP addresses. Click **Forward**.

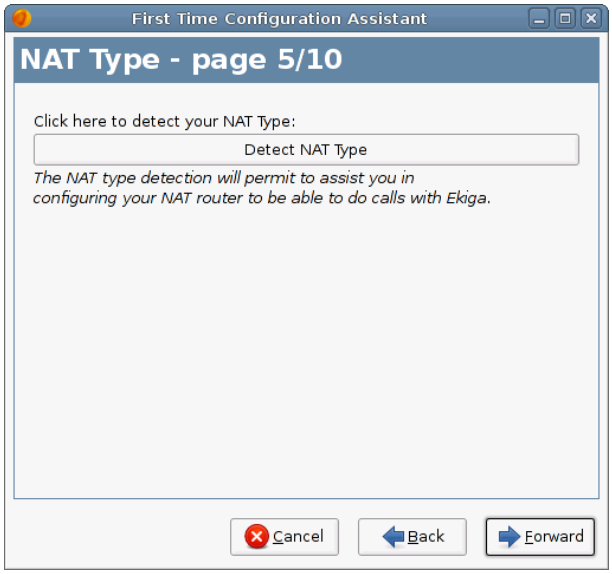
First Time Configuration Assistant
NAT Type - page 5/10
Click here to detect your NAT Type:
Detect NAT Type
The NAT type detection will permit to assist you in configuring your NAT router to be able to do calls with Ekiga.
Cancel
Back
Forward

Fig.37 Selecting NAT Type

6. You can make your music sound just like it was recorded by correct use of plug-ins. On the **Audio Manager** page, select the **audio manager**, which is the plug-in, according to the sound card of your computer. The audio manager is a plug-in that manages your audio device and is dependent on the operating system on your computer. Though it is recommended to use

ALSA, you should check with your system administrator to identify the appropriate audio manager for the audio device that you want to use. Then, click **Forward**.

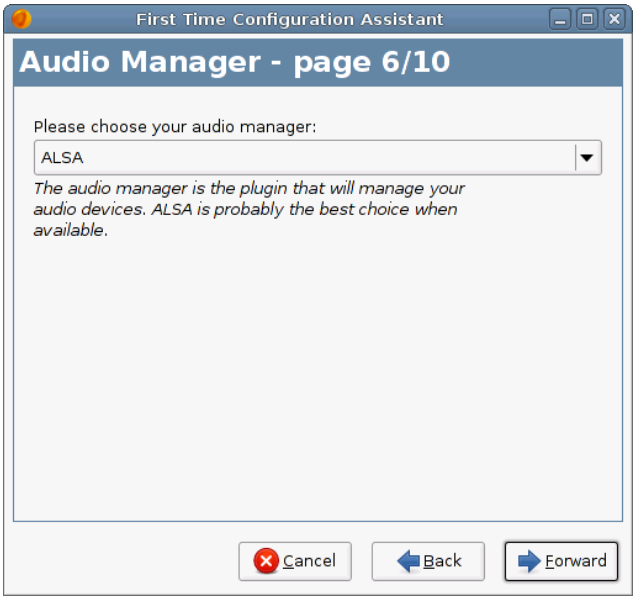
First Time Configuration Assistant
Audio Manager - page 6/10
Please choose your audio manager:
ALSA
The audio manager is the plugin that will manage your audio devices. ALSA is probably the best choice when available.
Cancel
Back
Forward

Fig.38 Selecting Audio Manager

7. Ekiga requires audio output and input devices to play and record sound files. The audio output device is used to play audio and audio input device to record your voice. So, on the **Audio Devices** page, select the **audio output** and **input devices**. For example, headset or speakers are the output device and your microphone the audio input device. Now, click **Test Settings** to check the functionality of audio devices and the click **Forward**.

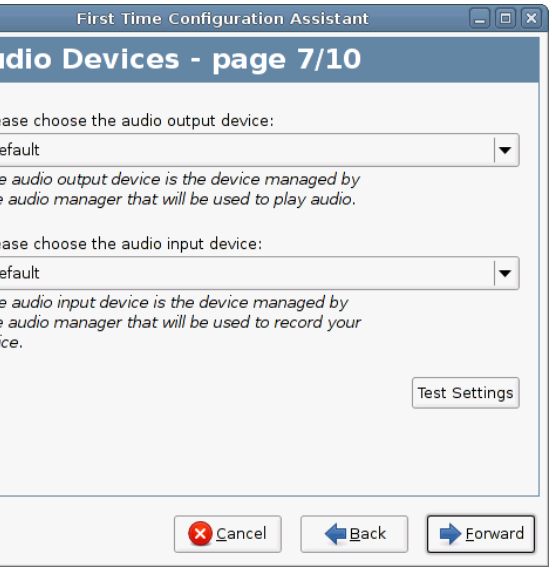
First Time Configuration Assistant
Audio Devices - page 7/10
Please choose the audio output device:
Default
The audio output device is the device managed by the audio manager that will be used to play audio.
Please choose the audio input device:
Default
The audio input device is the device managed by the audio manager that will be used to record your voice.
Test Settings
Cancel
Back
Forward

Fig.39 Selecting Audio Devices

8. On the **Video Manager** page, select the **video manager**, which is the

plug-in used to manage your video devices. You can select Video4Linux to manage Webcams or AVC / DC for Firewire cameras. Click **Forward**.

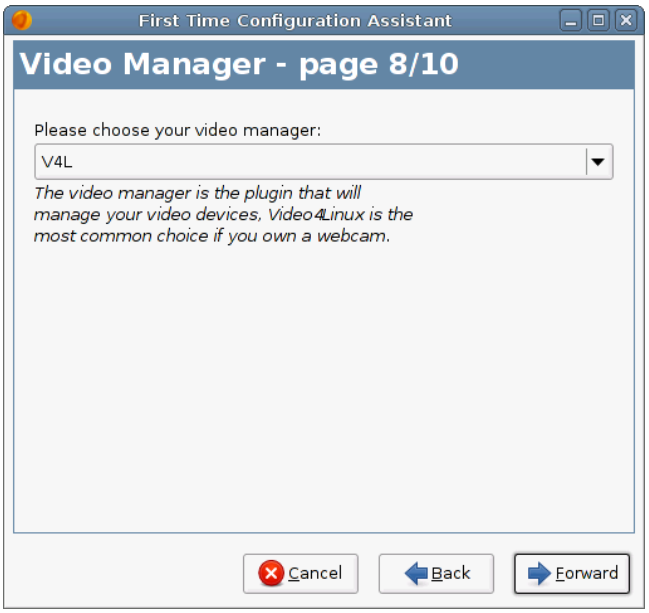
First Time Configuration Assistant
Video Manager - page 8/10
Please choose your video manager:
V4L
The video manager is the plugin that will manage your video devices, Video4Linux is the most common choice if you own a webcam.
Cancel
Back
Forward

Fig.40 Selecting Video Manager

9. On the **Video Devices** page, select the **video input device** from the **Please choose the video input device** box. The video input device is the device managed by the video manager that will be used to capture video. If you do not want to do video conferencing or if you do not have a video device, you may **skip** this page.

   Click **Test Settings** to ensure that your video device works with Ekiga. Click **Forward**.

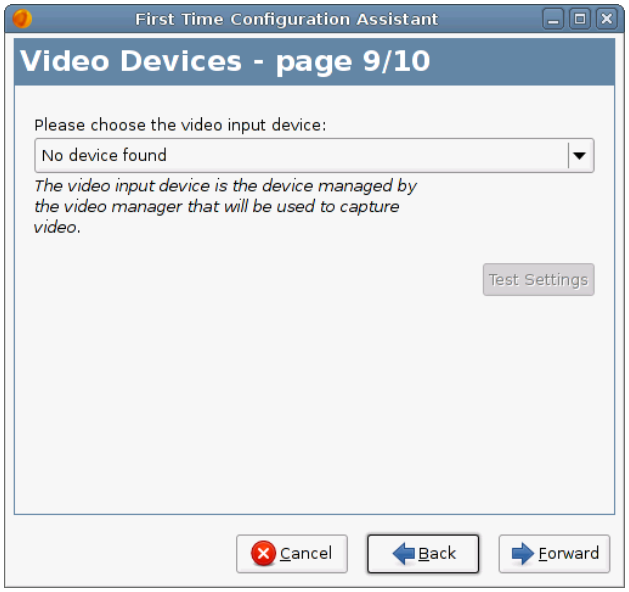
First Time Configuration Assistant
Video Devices - page 9/10
Please choose the video input device:
No device found
The video input device is the device managed by the video manager that will be used to capture video.
Test Settings
Cancel
Back
Forward

Fig.41 Selecting Video Devices

10. The configuration of Ekiga is now complete. This window displays a configuration summary of the settings you have selected. You can verify your settings here. In case you want to make any modification, navigate to the required page by using **Back** and **Next** and make appropriate changes. Click **Apply** to save the configuration.

Fig.42 Account Configuration Summary

The Configuration Assistant will close.

*Note: After installing Ekiga, if you want to modify any configuration, you can run the configuration assistant again by **Preferences** on the **Edit** menu in the Ekiga window.*

The Ekiga window will be displayed. It is the default softphone application available on Nepalinux.

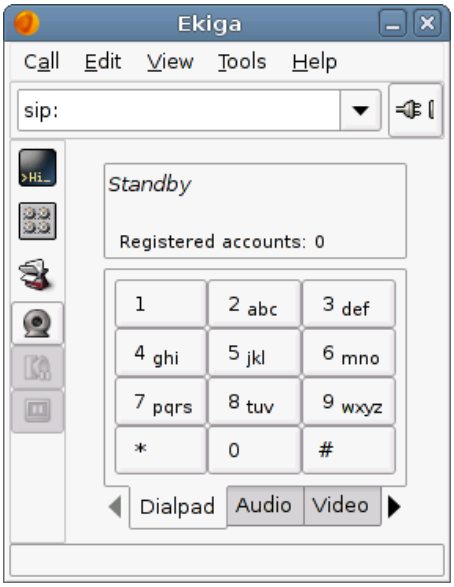

Fig.43 Ekiga Window

Making Calls Using Ekiga

From Computer to Computer

To place and receive calls through your computer, you require a SIP address. You can use the SIP address to call your friends and family, and they in turn can use this address to call you. A SIP address works on the the same principle as an e-mail address. You can sign up for a free account on Ekiga.net and this will give you a unique SIP address. An example of SIP address is sip:dsandras@ekiga.net.

Using Ekiga, you can call anyone who is registered to the public SIP provider and uses a SIP software or hardware. You can use the online address book of Ekiga to find the SIP addresses of other Ekiga users. It is of course possible to call users who are using another provider than ekiga.net. You can actually call any user using SIP software or hardware, registered to any public SIP provider. To make calls, you can type the Uniform Resource Locator (URL) address of the user you wish to call in the sip: input box and click the connect icon on the right of the text box to place a call. If you know the URL address of the party that you wish to call, you may enter that URL into the sip: input box at the top of the screen and press the Connect button. Pressing the Connect button would call the user at that address. With the default setup, you can simply type sip:foo to call user foo@ekiga.net.

From Computer to Regular Phones

You can use Ekiga with multiple Internet Telephony Service Providers. There is a charge for this service so you will need to create an account with the provider first. You can then dial the numbers from the **Dialpad** and make calls. If you want to create an account and use it to call your friends and family using appears, which allows you to create an account using the Get an Ekiga PC-to-Phone account. After the account is created, you will receive a login and a password by an e-mail message. Simply enter them in the dialogue box, select Use PC-To-Phone service and you are ready to call regular phones using Ekiga. With the default setup, you can simply use sip:00911129535955 to call the real phone number 003210444555, 00 is the international dialling code, 91 is the country code and

1129535955 is the number to call.

From Real Phones to Computer

You can also use Ekiga to receive incoming calls from regular phones. For this, you have to login to **PC-To-Phone** account and purchase a phone number. Ekiga then rings, when people call you at that phone number.

4.3 Photos and Graphics

In this Chapter, you will know about:

- Image viewing application
- Sharing and uploading images
- Image editing application
- Scanning images

There are many graphics applications available in Nepalinux 3.0 namely,

i. Image Viewer - Eye of GNOME
ii. Image Viewer and browser - gThumb
iii. Image Editor – GIMP
iv. Scanning Tool - XSane

Some of the tools has been explained below. You can get help from the respective application's manual on **help** menu as well.

4.3.1 Eye of Gnome

It is an image viewing application. To launch the application, click on **Applications** menu, point to G**raphics** and select **Image Viewer**. With the use of this application you can view the images in fullscreen mode, you can slice show, rotate and flip images, zoom in, zoom out and set particular image as the desktop background.

4.3.2 gThumb

An advanced image viewer developed for the GNOME environment, gThumb enables you to browse and locate image files, organize images in catalogues, print images, view slide shows and export Web-based albums with various graphic themes. This application also offers the typical features of an image viewer, such as copying, moving, deleting, printing, zooming and converting image formats.

Images can be viewed in various formats, such as BMP, JPEG, GIF, PNG, TIFF, ICO and XPM. You can also view GIF animations.

Viewing Images

1. On the **Applications** menu, point to **Graphics** and click **gThumb Image Viewer**. The gThumb window opens.
2. In the left pane of the **gThumb** window, click **Image**s and navigate to the folder that contains the images. Alternatively, if you know the name of the image, type the image name and click **Search** on the toolbar. The right pane of the **gThumb** window displays the selected image as a thumbnail.

3. If there are too many images displayed in the right pane, it may be difficult for you to find the image you want. The **Show** option at the bottom in the right pane limits the range of visible images. For example, you can specify a criterion, such as **Date**, to display images stored on your computer on a specific date or **Size**, to display images of a specific size. Click the **Show** arrow and select the appropriate option from the **Show** list.

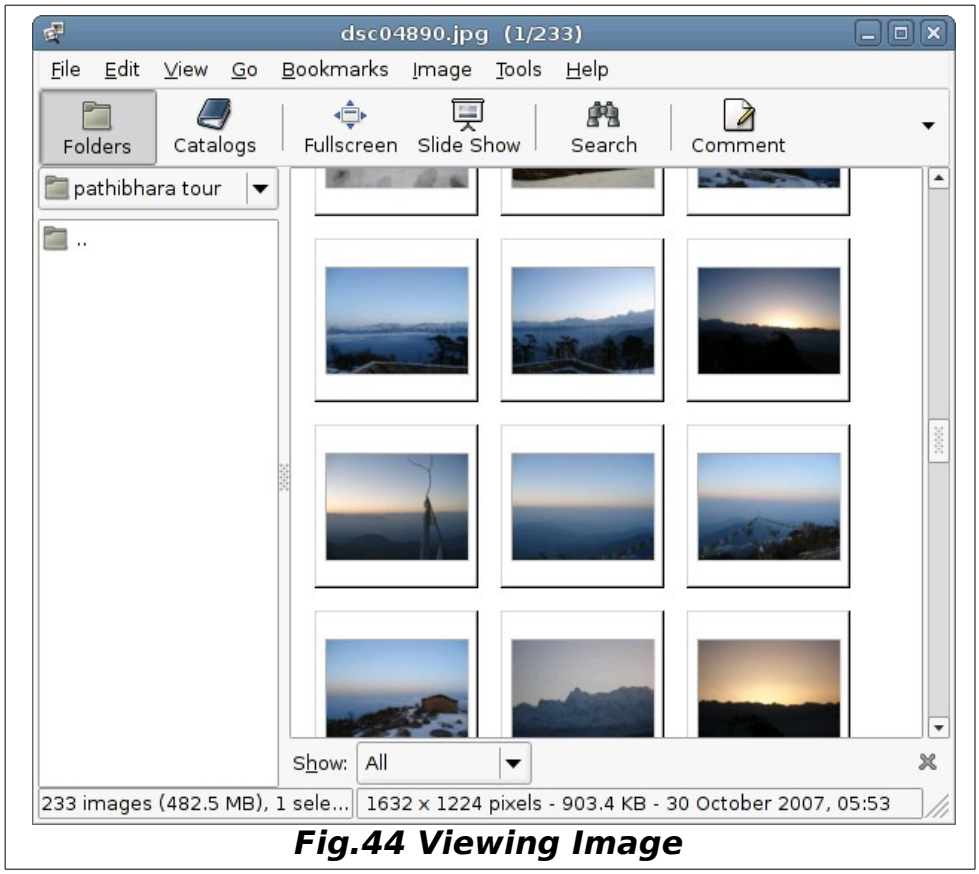

Fig.44 Viewing Image

Running Slide Shows

You can create slide shows to save clicking through your photos. A slide show is a display of a series of chosen images.

To run a slide show:

1. Select the images you want to include in your slide show. In the gThumb window, click Slide Show to start a slide show of all the images in the right pane, in the order of arrangement. To view a slide show of a few selected images, hold down the Ctrl key, click the images you want to view, release the Ctrl key and click Slide Show. The slide show begins, displaying all the images, beginning with either the first image in the pane or the one you selected.
2. The gThumb slide show uses the default settings of a 4-second delay between images, one-time play forward and fading effects as transition between images. To change the default slide show settings, on the Edit menu, click the Preferences option. The gThumb Preferences dialogue box opens.

3. In the gThumb Preferences dialogue box, click the Slide Show tab and change the slide show settings. Click **Close**.

Fig.45 Slide Show

Importing Images

You can images to your computer from camera. This function lets you import and save the images to your preferred location with the filename as you want.

To import images:

1. Plug in the camera via USB cable.
2. On the **File** menu, click on **Import Photos.** The **Import Photos** appears.

Fig. 46 Importing Images

3. Give the location where you wish to download the photos to in **Destination** box. The photos will be imported into a sub-folder of the **Destination** folder. The name of the sub-folder is set by the **Film** box. If no "Film" folder is specified, a sub-folder name consisting of the import data and time will be

automatically generated.

Categories can be specified for the imported photos using the **Categories** box.

If the **Delete imported images from the camera** checkbox is enabled, the photos will be deleted from the camera after they have been imported.

gThumb will rename the images (in numerical re-order) when they are imported, unless the **Keep original filenames** checkbox is selected.

If the **Rotate images physically** checkbox is selected, and the imported photo contains an Exif orientation tag, the image data will be physically transformed (losslessly) so that the viewed image looks the same as before but the orientation tag is reset to "top left". If this checkbox is not enabled, the image data and the orientation tag are both left unchanged. The image will be displayed identically by gthumb for both possibilities, but for maximum compatibility with other applications this checkbox should be enabled.

4. gThumb should auto-detect your camera (if it is turned on) when you launch the **File ▸ Import Photos** dialog. If it does, a camera icon will be displayed in the dialog box. If not, a camera with an "X" through it will be shown.

   If the wrong camera has been detected, click the camera icon to select a different one. A drop-down box listing all auto-detected cameras will be shown. If the **Use manual selection** instead checkbox is enabled, the user can manually set the camera model and port.

5. Click on **Import** button. The files now gets imported.

4.3.3 The GIMP

The GIMP is an image manipulation program. It is an open-source multi-platform image manipulation tool, available in many languages. You can use GIMP to perform tasks such as re-touch photos, compose and author images, re-size and crop images, manipulate colors and convert image formats.

GIMP has a number of useful features:

- A full suite of painting tools, including brushes, a pencil and an airbrush
- Selection tools such as rectangle, ellipse, free, fuzzy and bezier
- Transformation tools such as rotate, scale, shear and flip
- Tile-based memory management so that the image size is limited only by available disk space
- Multiple undo/re-do operations limited only by disk space
- Advanced scripting capabilities
- Layers and channels for complex drawings
- Sub-pixel sampling for all paint tools to minimize distortion while representing high-resolution images in lower resolution or stretched mode

- Full alpha channel support to simulate transparency in images
- Support for multiple file formats, including GIF, JPEG, PNG, XPM, TIFF, TGA, MPEG, PS, PDF, PCX and BMP

To launch GIMP from the desktop:

1. On the **Applications** menu, point to **Graphics** and click **GIMP Image Editor**. The GIMP Tip of the Day prompt is displayed. Click **Close** on the GIMP Tip of the Day prompt. The **GIMP window** opens.

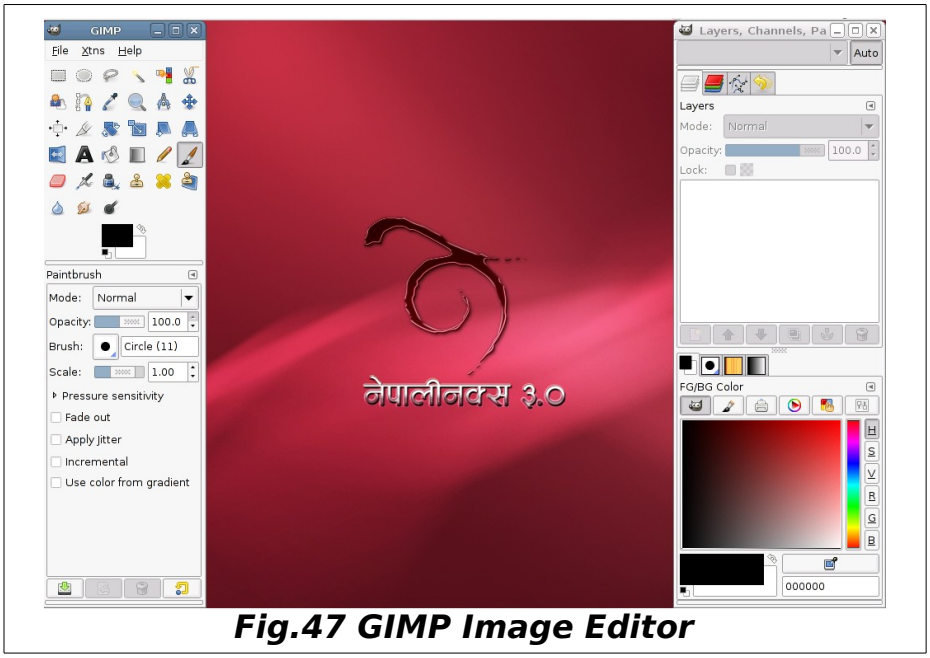

Fig.47 GIMP Image Editor

2. To open an image for modification, on the **File** menu, click **Open** and select the image you want to modify.
3. The selected image opens in the Image window.
4. You can now modify the image by using the tools available in the GIMP window.

The detailed user manual for GIMP can be accessed from http://docs.gimp.org/

4.3.4 XSane – Image Scanning Program

Scanner in NepaLinux is accessed through XSane utility. XSane stands for "Scanner Access Now Easy" and is an application that provides access to image scanner hardware.
To launch XSane go to **Applications** menu, point to **Graphics** and click on**XSane Image Scanning Program**

On the first launch, the **End User License Agreement** window appears, click on **Accept** button.

XSane scans for any scanner attached with the computer. If no devices are detected, **No devices available** window will appear which asks you to either

close or go for **help**. If the detection is successful, XSane program will be invoked and by default two windows will be displayed.

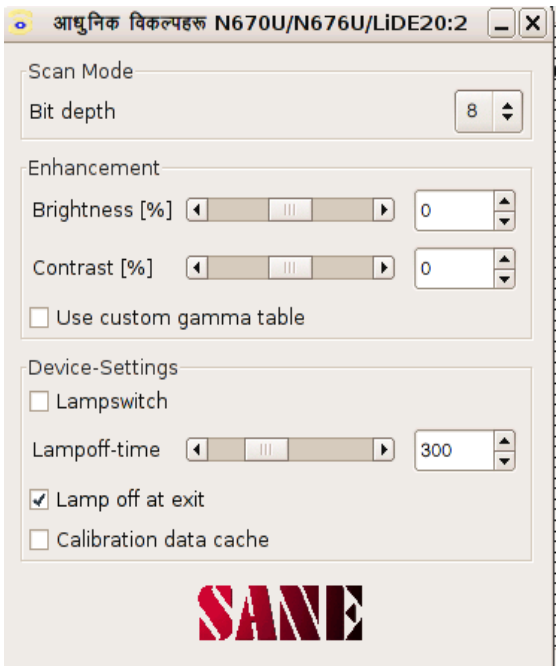

Fig.48a Xsane Advance Options

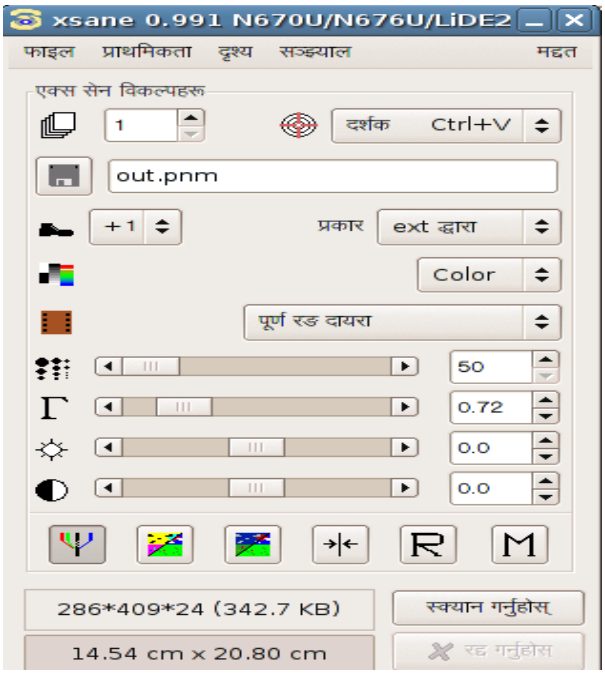

Fig.48b Xsane Main Window

Users can adjust brightness,contrast and resolution as per need. Once things like brightness, contrast and modes are selected, place material to be scanned in the scanner and select **Window** menu and click on **Show Preview** from sane window and click on **Acquire preview** in the **Preview window**. Once the complete preview is displayed, user can mark the area which is to be scanned and click on **scan** from the XSane window. Now you can save the file from **Save Image** in **File** menu from the viewer window. Image can be saved in common formats like jpeg, png,tiff and other.

4.4 Music and videos

In this chapter, you will learn to:

- Use multimedia players for listening to audio and playing video files

4.4.1 Listening to Audio

XMMS (X multimedia system)
The XMMS (X Multimedia system) applications can be used to play a wide variety of digital audio files format. These include the popular MP3 as well as the Open Ogg Vorbis format.

Go to **applications** menu, point to **Sound & Video** and click on **XMMS** to launch the application.

Fig.49 XMMS Player

4.4.2 Playing Video with Totem

The Totem Movie Player application is a movie player for the GNOME desktop based on xine library, it enables you to play movies or songs.

Totem Movie Player provides the following features:

- Support a variety of video and audio files.
- Provide a variety of zoom levels and aspect ratios, and a full screen view.
- Seek and Volume controls.
- A playlist.
- A complete keyboard navigation.

Go to **applications** menu, point to **Sound & Video** and click on **Totem Movie Player** to launch the application.

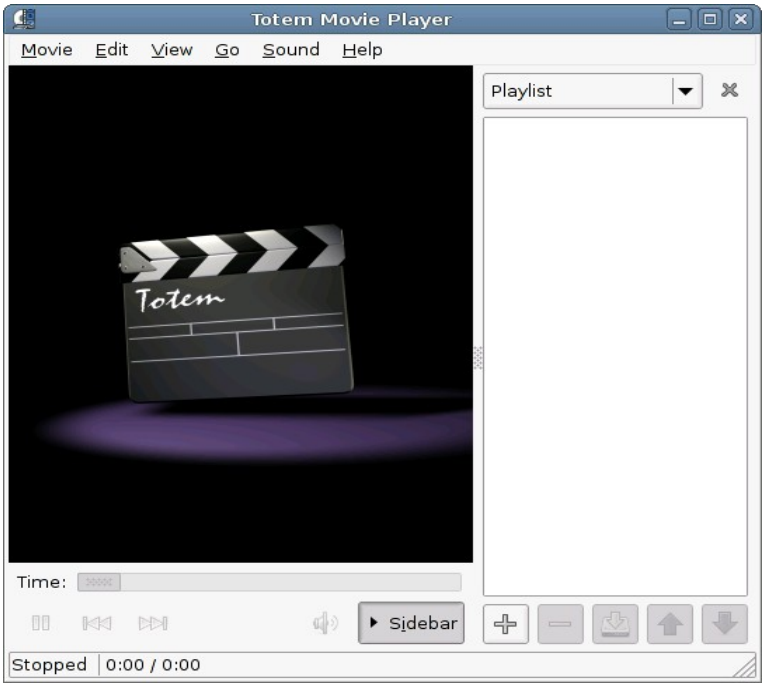

Fig.50 Totem Movie Player

4.4.3 Burning/ Writing to CD/DVD

Go to **Applications** menu, point to **Sound & Video** click on **CD/DVD writer GnomeBaker**

The GnomeBaker application enables you to write and manipulate different types of CD/DVD recording media.

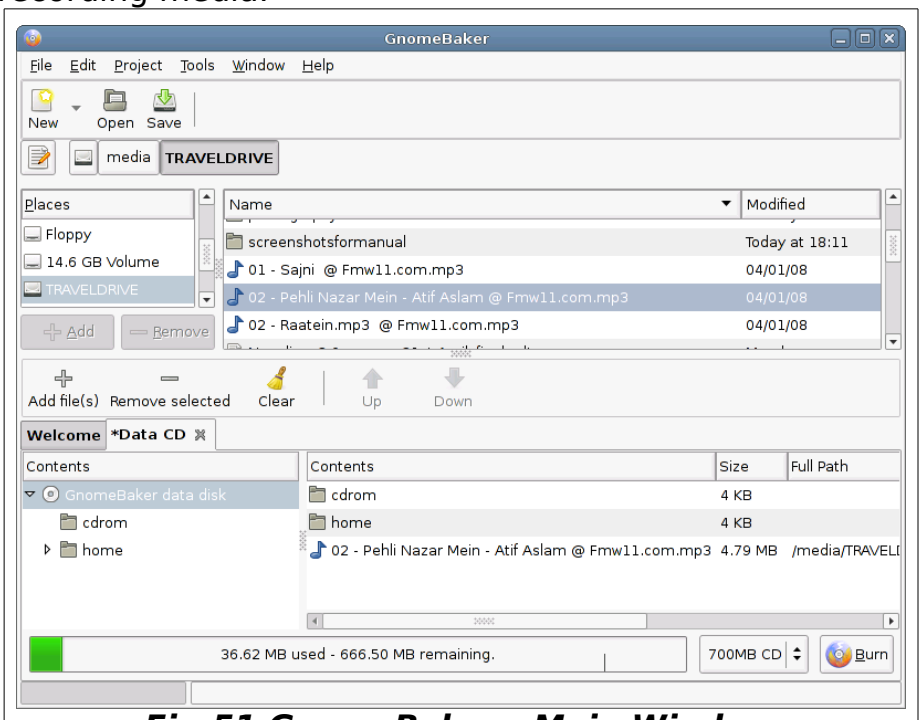

Fig.51 GnomeBaker - Main Window

Creating a Data CD
To create a Data CD, choose **Data CD** from the Compilation Browser. Then drag the files you want to burn on the CD from the **Filesystem Browser** to the **Compilation Browser**. Then press the **Create Data CD** button in the lower right corner. After clicking it, you will see the following dialog:

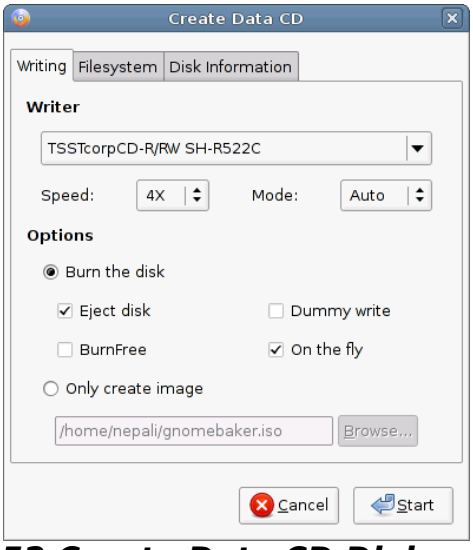

Fig.52 Create Data CD Dialog box

Select the **speed** that you want to burn the CD.
Select the **Dummy Write** option to simulate CD writing.

Blank a CD-RW
To erase a CD-RW, choose **Actions → Blank CDRW**.

Burn an ISO Image
To burn an ISO image, choose **Actions → Burn CD Image/Burn DVD Image**.

4.5 Accessories

Accessories is the section which incorporates all the packages available in **Accessories** section of **Applications** menu. The packages are:

4.5.1 Bluetooth Analyzer

This application helps to detect the Bluetooth device whenever connected to the computer. With the help of Bluetooth application we can send and receive data from other Bluetooth enabled computers, mobile phones and Palmtops.

4.5.2 Take Screenshot

This tool captures the displayed screen as an image file which can be saved to any desired location.

4.5.3 Character Map

The Character Map application allows you to insert special characters into a document or a text field. Character Map provides accented characters, mathematical symbols, special symbols, and punctuation marks. Use Character Map to access characters that are not available on your keyboard.

Character Map displays all the characters are available in all of the language scripts on your system, using the Unicode character set. Unicode is a character set standard with the goal to include all of the characters that are used in all of the written languages in the world.

4.5.4 Calculator

The Calculator application provides the following modes for different types of mathematical functionality:

Basic

The default mode. Provides standard calculator functions. You can perform standard addition, subtraction, division, and multiplication functions in Basic mode and you can use all of the Basic functions in each of the other modes.

Advanced

Provides advanced calculator functions. You can store numbers in 10 different memory registers, and easily retrieve and replace the numbers in the memory registers. You can use all of the Advanced functions in Financial and Scientific modes.

Financial

Provides several complex financial functions.

Scientific

Provides many additional mathematical functions, including trigonometric and

bitwise functions. You can also store your own functions and constants, when you use Scientific mode.

You can use Calculator in the following numbering systems:

Numbering System	Base
Binary	2
Octal	8
Decimal	10
Hexadecimal	16

4.5.5 Terminal

GNOME Terminal is a terminal emulation application that you can use to perform the following tasks:

Access a UNIX shell in the GNOME environment

A shell is a program that interprets and executes the commands that you type at a command line prompt. When you start GNOME Terminal, the application starts the default shell that is specified in your system account. You can switch to a different shell at any time.

Run any application that is designed to run on VT102, VT220, and xterm terminals

GNOME Terminal emulates the xterm application developed by the X Consortium. In turn, the xterm application emulates the DEC VT102 terminal and also supports the DEC VT220 escape sequences. An escape sequence is a series of characters that starts with the Esc character. GNOME Terminal accepts all of the escape sequences that the VT102 and VT220 terminals use for functions such as to position the cursor and to clear the screen.

4.5.6 Text Editor

The gedit application enables you to create and edit text files. The aim of gedit is to be a simple and easy to use text editor. More powerful features can be enabled with different plugins, allowing a variety of tasks related to text-editing.

4.5.7 Dictionary

The Dictionary application enables you to search words and terms on a dictionary source.

5. Customizing desktop

The objective of this section is to help the users customizing Gnome desktop Environment. In this section you will know how to:

- Change Background
- Change themes
- Customize Screensaver
- Chang Screen Resolution
- Use Synaptic Package Manager

For Customizing Nepalinux, the graphical tools are available as menu options in the **System** menu. Point to **Preferences** on the **System** menu to view the tools.

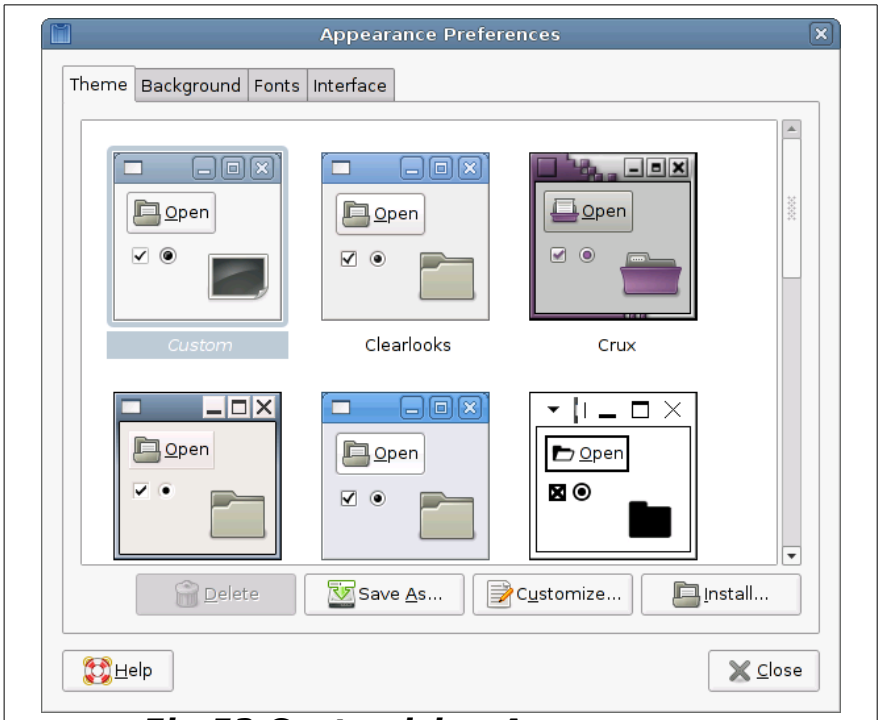

Fig.53 Customizing Appearance

Note: The **System** - **Preferences** menu allows users to customize their own desktop environment in a way that may differ from other users on the same computer. In contrast, **applications** on the **System** - **Administration** menu will make changes to the computer that will affect all users.

5.1 Changing Background

The desktop background is the image or color applied to your desktop. You can change the default Simple Nepalinux background. To change the background of the desktop:

1. On the **System** menu, point to **Preferences** and then click **Appearance**. The **Appearance Preferences** dialogue box opens.

   Nice to Know: You can also right-click the **desktop** and select **Change Desktop Background** to open the **Appearance Preferences** dialogue box.

2. In the **Appearance Preferences** dialogue box, select a desktop wallpaper from the available wallpapers. The background changes immediately.
3. Click Close in the Appearance Preferences dialogue box to apply the changes.

5.2 Changing Theme

The desktop theme controls the visual appearance of the buttons, scroll bars, icons, panels, borders etc. Nepalinux 3.0 provides a number of themes you can use to change the appearance of the GNOME desktop and applications.

To select a theme for your desktop:

1. On the **System** menu, point to **Preferences** and click **Appearance**. The Appearance Preferences dialogue box opens.
2. On the **Theme** tab, select the theme of your choice. The desktop reflects the theme automatically. To customize your theme further, click **Customize.** The Customize Theme dialogue box opens.
3. The default selection is **Controls** tab. The setting on the **Controls** tabbed page defines the visual appearance of windows, panels and applets. Select a control from the **Controls** list. You can see an immediate change in the appearance of the open windows.
   Similarly, you can customize the background and text color of your windows, input boxes and selected items by configuring the settings on the **Colors** tab. If you want to customize your window borders and icons, click the **Window Border** and **Icons** tabs in the Customize Theme dialogue box.
4. Click **Close** in the Customize Theme dialogue box. To save the theme, click **Save As** in the Appearance Preferences dialogue box. The Save Theme As dialogue box opens.
5. Provide a name to the theme in the **Name** box and a description, if you want, in the **Description** box. Click **Save**.
6. In the Appearance Preferences dialogue box, click **Close**.

5.3 Customizing a Screensaver

A Screensaver displays (often moving) images on the screen when your computer is switched on but not in use. To go back to the workspace, you can move the mouse or press any key on the keyboard.

You can choose a Screensaver and customize it. To customize a Screensaver:

1. On the **System menu**, point to **Preferences** and click **Screensaver**. The Screensaver Preferences dialogue box opens.
2. Select the Screensaver from the list of available Screensavers. You can preview the Screensaver in the right pane.
3. The **Regard the computer as idle after** slider specifies when a Screensaver starts to work if the computer is not in use. The default time is set to 10 minutes. You can use this slider to select how long the computer needs to be idle before the Screensaver activates.
4. To prevent any tampering of your computer in your absence, you can automatically lock your screen the moment the Screensaver activates. Locking requires users to type their password to reactivate the desktop. Select the **Lock screen when Screensaver is active** check box to lock

the screen when the Screensaver starts.

5. Click **Close**.

5.4 Customizing the Screen Resolution

The screen resolution determines how large or small an item looks on the screen. To modify the screen resolution of the GNOME desktop:

1. On the **System** menu, point to **Preferences** and then click **Screen Resolution**. The Screen Resolution Preferences dialogue box opens.
2. You can change the resolution in the **Resolution** box.
3. Click **Apply**. The Keep Resolution dialogue box opens, prompting you to confirm settings or use the previous resolution and revert to the original settings. Click **Keep resolution** to apply new changes.
4. The screen resolution will change.

5.5 Using Synaptic Package Manager

Add/Remove Applications does not allow you to install and remove all advanced packages, such as the Apache web server, the PHP program- ming language or Scribe. In such cases, use Synaptic Package Manager.

Synaptic Package Manager combines the point-and-click simplicity of the GUI with the power of the apt-get command line tool. You can install, remove, configure or upgrade software packages, browse, sort and search the list of available software packages, manage repositories or upgrade the whole system. You can queue up a number of actions before you execute them. Synaptic informs you about the additional packages required by the software package you have chosen as well as conflicts with other packages that are already installed on your system. In addition, it presents more information such as package status, origin and filters.

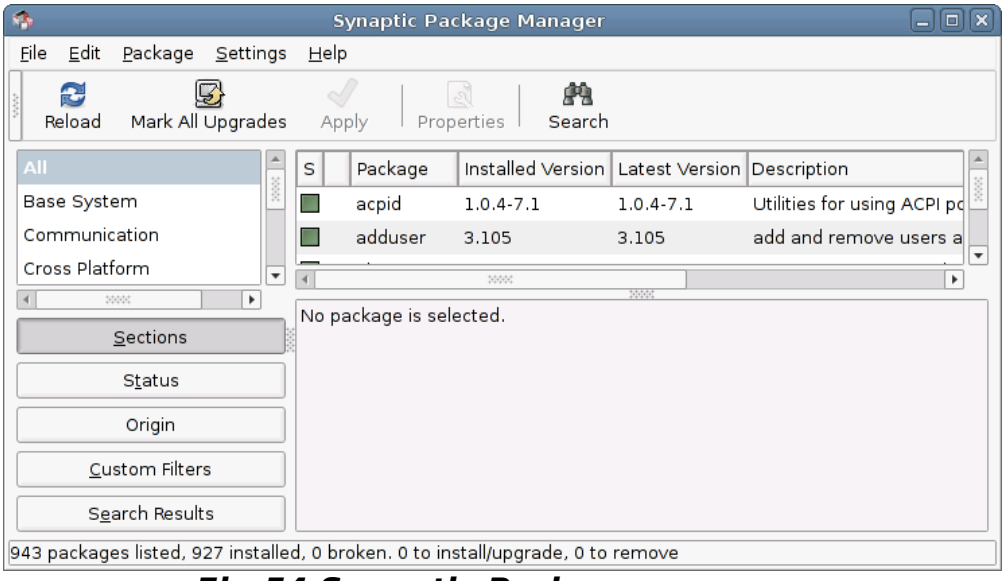

Fig.54 Synaptic Package manager

To add and remove any package using Synaptic Packager Manager:

1. On the **System** menu, point to **Administration** and then click **Synaptic Package Manager**.
2. In the **Synaptic Package Manager** dialogue box, you can select the package you need. The left pane lists the categories, and the right pane lists the packages. If you do not know the name of the package, select the category in the left pane to filter the list of packages. You can then select the check box next to the required package in the right pane.
3. If you know the name of the package, click **Search**. The **Find** dialogue box opens. Type the name of the package in the **Search** field and click **Search**.
4. Choose the action to be performed on the selected package. Select the **Mark for Installation** check box to install the package or select the **Mark for Removal** check box to remove it. If you change your mind, select the **Unmark** check box.
5. If the package that you choose to remove or install depends on other packages, you will be notified about the dependencies. To continue making changes, click **Mark**.
6. To confirm that you want to make the marked changes, click **Apply**.
7. The **Summary** dialogue box opens, prompting you for a final check before making the marked changes. Click **Apply** to continue with the changes.
8. When all the marked changes are made, you are notified about the changes applied. Click **Close** to close Synaptic Package Manager.

This step completes the procedure of installing packages by using Synaptic Package Manager. You can access the installed package by selecting a particular menu, depending on the category of the package.

6. Administrating Nepalinux

The objective of this section is to help the users Administering Nepalinux. In this section you will know how to:

- Create user accounts
- Setup Printer
- Fonts installation and input systems
- Share files
- Configure Automount
- Setting up defaults operating system

6.1 Creating User Account

You might have multiple users who want to access your system. In this case, there is a risk of data being manipulated or corrupted by other users. To prevent this from happening, you can create user accounts for each individual who wants to use your computer, giving each user an individual account with personalized user settings. For example, it is useful to give children their own accounts on the computer -- this prevents then from changing other people's settings.

To create a new user account on Nepalinux:

1. On the **System** menu, point to **Administration** and click **Users and Groups**. The **User settings** dialogue box appears.
2. In the **User settings** dialogue box, click **Add User** to add a new user account on your computer. The **New user account** dialogue box opens.
3. Specify the user accounts' basic settings, contact information and password information in the **New user account** dialogue box.
   a. Type the **name** with which you want to log on to your computer in the **Username** box.
   b. Type your **full name** in the **Real name** box.
   c. Select your **user type** from the **Profile** box.
   d. Type your **office location** in the **Office location** box.
   e. Type your **work phone number** in the **Work phone** box.
   f. Type your **home phone number** in the **Home phone** box.
   g. Type the **password** for your user account in the **User password** box.

   Click **Close** to save the settings.
4. A new user account will be displayed in the **User settings** dialogue box. This dialogue box informs you about the full name and the log on name of the new user. It also tells you the location of the new user account created.

6.2 Printer Setup

1. Go to **System** menu**,** point to **Administration** and click on **Printing.**

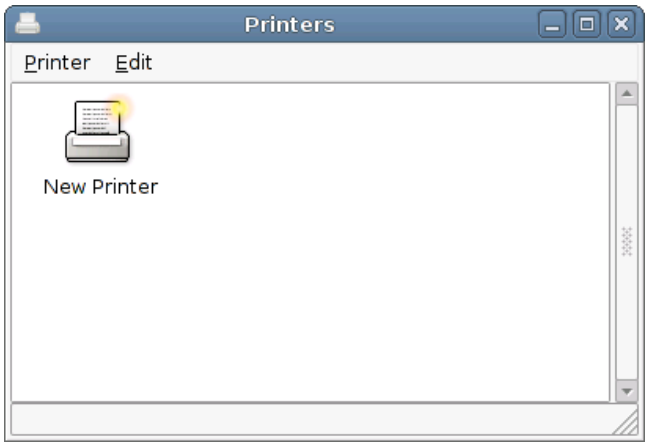

Fig.55 Printing

You are asked with the administrator (root) password. Please provide the password.

2. Click on New printer
3. Choose Printer Type: Local Printer and click **Forward** to move to the next step.

Fig.56 Add a Printer

4. Choose the Manufacturer for your printer from the list of manufacturers.

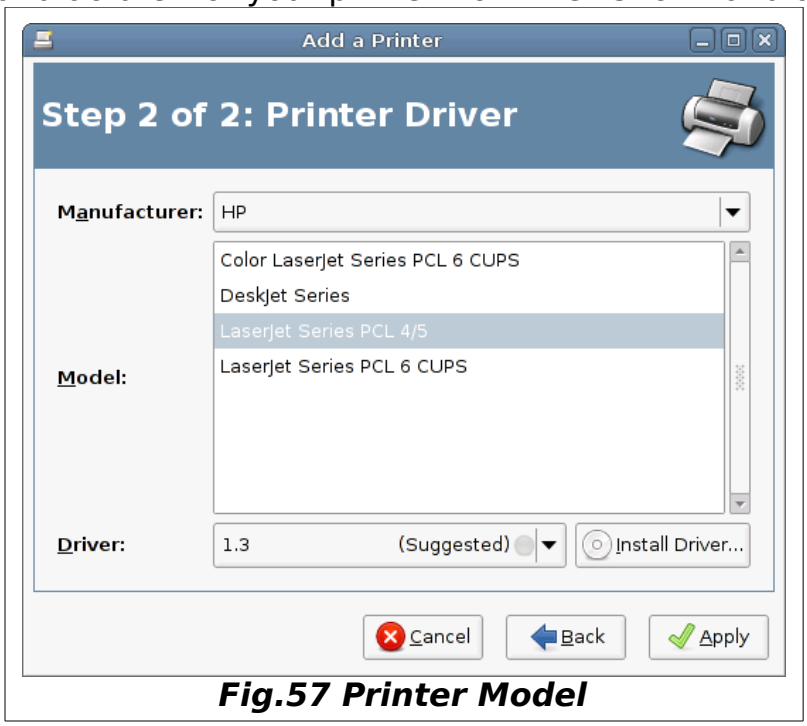

Fig.57 Printer Model

5. Then choose the model and click **Apply**.

For Network Printer

Initial steps for launching the program is same as above but:

1. Choose Printer Type: Network Printer
2. Then either choose **CUPS Printer (IPP)** or **Windows Printer (SMB)** as required.

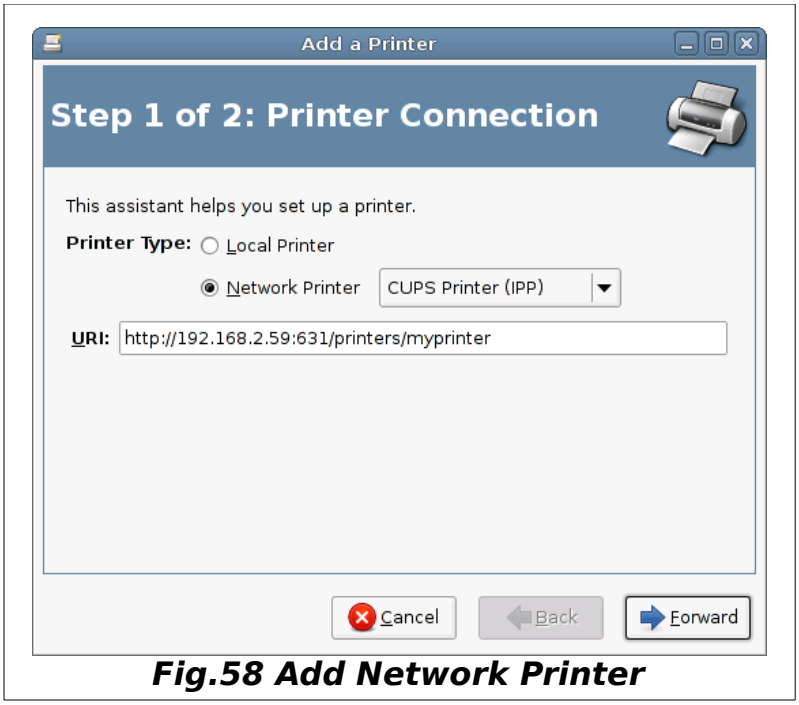

Fig.58 Add Network Printer

3. Give the required information like **URL/Host, Printer, username, password**, etc.
4. Click **Forward** to move to the next step.
5. Choose manufacturers from the list of manufacturers.
6. Then choose the model and click **Apply**.

Alternatively, you can configure printer via web browser.

1. Open web Browser. And type:

   http://localhost:631

2. The cups (Common Unix Printing system) page appears. If page is not displayed, please check if cups service is running on your Linux system.
3. Click on **add printer**. Fill the **name, location and description** as you wish. It is for the identification of printer in your computer. Then press **continue.**
4. Scroll down on device list. Select "**Internet Printing protocol HTTP**". Click on **continue**.
5. Give device URL for the printer. It is:

   http://192.168.2.59:631/printers/mppprinter

6. Select printer vendor, **HP**(for example), in make/manufacturer list.

7. Select printer's Model, **HP Laserjet 1300 Foomatic/hpijs - HPLIP 1.6.10 (en)**(for example), in model list. If its not available choose any other matching driver.
8. Click on **add printer.**
9. Provide **root password** of your Linux machine.
10. "**Printer has been successfully added.**" is displayed. Close the browser.

6.3 Fonts installation and Input System

6.3.1 Nepali Input system

Two popular input method XKB and SCIM are used in NepaLinux for Nepali input system.

To configure XKB

Adding the keyboard indicator in the panel.

1. Right click on the top panel, click on **Add to the Panel** , and select **Keyboard Indicator** then click **Add** and then **Close**.
2. Right click on the panel where **USA** is written, click on **Keyboard Preferences** .
3. Select **Layout** tab and click on **Add** button.
4. Add **Nepal** and then click **OK.**

Now, you can select the keyboard layout by clicking on the panel indicator. Or Alternatively you can use certain key combination for convenience. To configure the shortcut, Right click on the panel where **USA** is written, click on **Keyboard Preferences** . Select **Layout Options** tab and click on **Layout Switching.** Select any key combination. Your selection will be the layout switcher for the computer. So now on you can easily switch keyboard layout through that particular keys combination.

SCIM

NepaLinux uses SCIM input system by default. For SCIM, just press **Ctrl** and **Space Bar** key simultaneously after you open an application(Editors or publishers such as OpenOffice. At the bottom right of the screen, SCIM panel appears. Choose Nepali Romanized or Traditional layout as you want for Nepali input system.

Fig.59a Nepali Romanize Layout

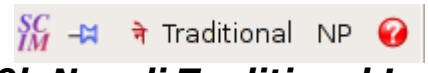

Fig.59b Nepali Traditional Layout

6.3.2 Fonts installation

To install fonts into the Nepalinux.

1. Open **gnome-terminal** either by typing in run window(Press **ALT+F2**) or via menu, click on **Applications** menu and point to A**ccessories** and click on **Terminal.**
2. Type: **su**
   to login as root.
3. Then submit the root password.
4. Type **nautilus**
   This opens a root permission enabled nautilus file browser. Go to the folder having new fonts to be installed via this browser. **Select** and **copy** the fonts and in the same file browser window, go to **/usr/share/fonts** directory and paste the fonts by right-clicking on the whitespace of the window.
5. Then you may close the window.
6. In the terminal u had open previously, type: **fc-cache -c** and press **Enter.**
   This command updates the font database so you can use it without restarting the computer.

6.4 Sharing Files

6.4.1 For sharing a file

1. Go to **Systems** menu, point to Administration cand click on **Shared Folders**
   you are asked to enter Root password, just enter the Root user password.

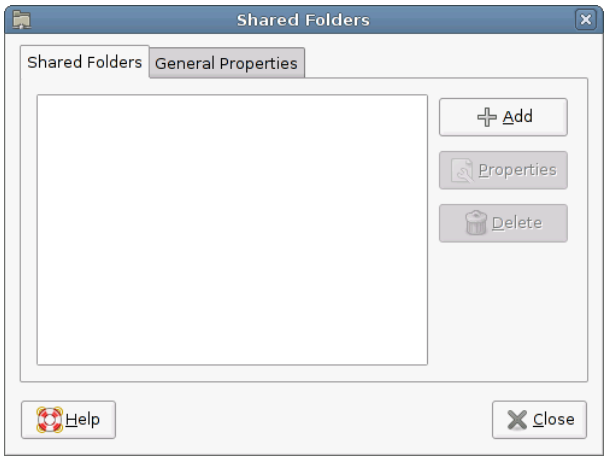

Fig.60 File Sharing

2. Then click Add

3. Browse the folder you want to Share. Choose the protocol **SMB** for sharing. Provide Shared Name and comment. Check the Read Only check box if you want to share the folder read only, and check the Browsable check box to allow browse permission to the remote users. Finally Click **OK**.

Here, we have successfully shared the folder (train)for both windows and NepaLinux machine
To directly share the folder, right click it and click “Share Folder” provide the root password and then share name and click **OK**.

6.4.2 Accessing the Shared Folder

Click **Computer** and Then in nautilus window location address bar, type: **smb://<IP>** or **<hostname>**
or press **Alt+F2** and then type: smb://**<IP or hostname>**
You can access the shared folder through the Network Places in **Places** menu as well.

6.5 Configuring Automount

Nepalinux detects your internal and external storage devices from harddisk to flash cards and drives. The detected device is automatically mounted on your computer. If you want to stop Nepalinux from auto-mounting all the partitions when you boot into your operating system, you can do so by changing the default configuration settings.

1. To access the configuration settings for the partitions, on the **System** menu, point to **Preferences** and click **Removable Drives and Media**. The **Removable Drives and Media Preferences** dialogue box opens.
2. To prevent Nepalinux from auto-mounting all the drives, clear the first three check boxes on the **Removable Drives and Media Preferences** dialogue box and click **Close**. Or configure as you wish to.

After making the required changes in the **Removable Drives and Media Preferences** dialogue box, you will notice that Nepalinux does not auto-mount all the partitions and drives at boot-up.

In order to unmount the mounted device after being used, right click on that device drive icon in the desktop and choose **unmount Volume.**

6.6 Setting up Default Operating System

When multiple operating systems are installed on a computer, this is referred to as a multi-boot configuration. Typically, the operating system that is listed on top in the configuration file is loaded on the computer. To choose the operating system that starts when you turn on your computer, we need to edit the grub configuration file. But for user convenience, a package called Startup-Manager hides all configuration complexities and provides a easy user interface.

To launch Startup Manager:

1. Go to **System** Menu, point to **Administration**, and click on **StartUp-**

Manager. If password is asked, type the root password. The **StartUp-Manager** window appears.

2. In the **Boot options** tab, you can change the bootloader's timeout value in **Timeout in seconds** box, **Default Operating system**, **Display** values and other options.
3. In the **Appearance** tab, you can provide **color** or **picture background** to the boot menu. You can even add **bootloader themes** if you have downloaded to the computer.
4. In the **Security tab,** you can secure the bootloader by providing different password.

7. GNU, Free/Open Source Softwares and Linux

The objective of this section is to familiarize the user to GNU Project, Open Source Initiatives and Free Software movement, Free/Open Source Softwares(FOSS) and Linux. In this section you will know about:

- History of FOSS
- GNU/Linux Distributions
- Debian GNU/Linux and its Derivatives
- Localization

The **GNU (GNU's Not Unix) project** was started by Richard Stallman, also known as RMS, in the year 1984 to create a free Unix-like operating system. The Free Software Foundation (FSF) was created a year later to promote free software and the GNU project. Here, the term 'free' refers to freedom as in speech, not price.

Till 1991, it had created all the software and utilities required for a complete operating system except the kernel, which is the core of an operating system. That year, a Finnish college student, Linus Torvalds, created a Unix-like kernel called **Linux** and combined it with the required software and utilities from GNU project to form a Unix-like operating system.

In 1998, a group of developers came together to label a new term called '**Open Source Software**' in reponse to the release of Netscape source code. The **Open Source Initiative (OSI)** was formed along with the Open Source Definition. Among them was Eric Raymond whose famous book '**The Cathedral and The Bazar**' was one of the factors which led Netscape to open the source code.

Free/Open source software allows people to read, redistribute, and modify the source code for a piece of software. People improve it, adapt it, fix bugs and all this can happen at an astonishing speed in the distributed development model as compared to the conventional one.

7.1 GNU/Linux Distributions

GNU/Linux distribution, is a Unix-like operating system comprising software components such as the GNU/Linux kernel and assorted free, open source, and possibly proprietary software. There are currently over three hundred Linux distribution projects in active development, their respective distributions being revised and improved. A Linux Distribution can be derived from another Linux distribution by the necessary customizations to the original ones. The most popular Linux Distributions are:

- Debian GNU/Linux
- Red Hat
- Fedora
- OpenSuse
- Knoppix
- Ubuntu
- More....

Distributions are developed and supported by communities or commercial companies. Debian GNU/Linux for example is supported by the Debian community. On the other hand, Fedora, OpenSuse is developed and supported by commercial companies like Red Hat and Novell.

7.2 Debian GNU/Linux and derivatives

Debian is a widely used distribution of free software developed by the joint efforts of volunteers from around the world. It consists of a lot of basic tools of the operating system from the GNU project and supports the common computer architectures like: x86, Power PC etc. Debian GNU/Linux is the basis for several other distributions, including Knoppix, Ubuntu Linux and NepaLinux.
Debian is supported by donations made available by the Software in the Public Interest, a non-profit umbrella organization for free software projects.

Debian Derivatives

Debian Derivatives are subsets of Debian which are configured to support a particular target group out-of-the-box. For example: Debian aimed for science, Debian aimed for schools etc. In our case, NepaLinux, which is also a Debian Based Linux Distribution is targeted specially for Desktop users in the Nepali Language. The popular Debian Derivatives are:

- **DebianGIS**: a CDD for Geographical Information and Earth Observation Systems (includes OpenGIS and GPSTk).
- **Debian Jr**: For children
- **Debian Med**: For Medical
- **DebianNeo**: Debian Stable for newbies
- **DeMuDi**: For Audio (part of AGNULA)
- **Skolelinux** (built by the DebianEdu project): LTSPbased Debian aimed for schools.
- **UserLinux**
- **Knoppix**
- **Mepis**
- **Linspire**
- **Gnoppix**
- **Morphix**
- **Nepalinux:** Localized distribution in Nepali Language under PAN Localization Project

7.3 Localization

Localization is the adaptation of an object to a locality. An example is in software localization, where the messages which a program presents to a user need to be translated into various languages.
Basic Localization involves the following procedures:

* Creating the Locales
* Font Development
* Choosing the input method and creating keyboard mappings
* Updating the rendering engine to support native language
* Translation of strings of the software to be localized
* Localization of the applications to support the language

8. References

1. **NepaLinux User Manual version 1.0** and **2.0**

2. **Ubuntu 7.10 Desktop Training** for students
   http://wiki.ubuntu.com/Training

3. **OpenOffice.org Base**
   http://www.openoffice.org/product/base.html

4. **English Open Encyclopedia – Wikipedia**
   http://en.wikipedia.org

5. **GNU Project**
   http://www.gnu.org

6. **GNU General Public License**
   http://www.gnu.org/licenses/gpl.html

Appendix

Appendix I – GNU General Public License

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

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